

SAGE ENVIRONMENTAL

PHASE I INITIAL SITE INVESTIGATION

93-123 Williams Street North Dighton, Massachusetts RTN: 4-16565

Prepared for:

Mr. Charles Pollina American Auto Auction 93-123 Williams Street North Dighton, Massachusetts 02764

Prepared by:

SAGE Environmental, Inc. 172 Armistice Boulevard Pawtucket, RI 02860

Project Number: R035B

September 2002

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Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup SEP 13

Release Tracking Number

BWSC-107A

TIER CLASSIFICATION, TIER | EXTENSION & TIER II TRANSFER TRANSMITTAL FORM DER TRANSMITTAL FOR

Pursuant to 310 CMR 40.0510 and 40.05 00 (Sut	ipart E)
A. DISPOSAL SITE LOCATION:	
Disposal Site Name: American Auto Auction	
	Location Aid: Route 44 and Tremont Street
City/Town; North Dighton	ZIP Code: 02764
Related Release Tracking Numbers That This Submittal Will Address:	
B. THIS FORM IS BEING USED TO: (check all that apply)	
Submit a new or revised Tier Classification Submittal for a Tier I Site, includ (complete Sections A, B, C, I, J, K and L).	ing a Numerical Ranking Scoresheet
Submit a new or revised Tier Classification Submittal for a Tier II Site, include (complete Sections A, B, C, F, G, I, J, K and L).	ling a Numerical Ranking Scoresheet
Submit a Notice that an additional Release Tracking Number(s) is (are) be required at this time (complete Sections A, B, J, K and L). If this submittal is for Transmittal Form (BWSC-109).	
List Additional Release Tracking Number(s):	-
Submit a Phase I Completion Statement aupporting a Tier Classification S	iubmittal (complete Sections A, B, I, J, K and L).
Submit a Tier II Extension Submittal for Response Actions at a Tier II Site (co	omplete Sections A, B, D, F, G, I, J, K and L).
Submit a Tier II Extension Submittal for Response Actions taken after exp (complete Sections A, B, D, F, J, K and L, and also complete Sections G and I or	
Submit a Tier II Transfer Submittal for a change in person(s) undertaking Res (complete Sections A, B, E, F, G, I, J, K, L, M, N and O).	sponse Actions at a Tier II Site
Submit a Tier II Transfer Submittal for a change in person(s) undertaking 310 CMR 40.0630(6) (complete Sections A, B, E, F, J, K, L, M, N and O, and a	
You must attach all supporting documentation rec including copies of any Legal Notices and Notices to Pu *NOTE: The Waiver expires on the effective date of this submittal and a	iblic Officials required by 310 CMR 40.1400.
C. TIER CLASSIFICATION SUBMITTAL: Numerical Ranking Score for Disposal Site: (from Numerical Ranking Scoresheet)	192
Proposed Tier Classification of Disposal Site: (check one)	Tier IB Tier IC ☑ Tier II
Check which, if any, of the Tier I inclusionary criteria are met by the Disposal Site, pu	ursuant to 310 CMR 40.0520:
Groundwater is located within an Interim Welthead Protection Area or a Zo Oil or Hazardous Material at the time of Tier Classification at concentration Concentration set forth in 310 CMR 40.0360.	
An Imminent Hazard is present at the time of Tier Classification.	
Check here if this Tier Classification revises a previous submittal for this Disposithis submittal. If a Tier I Permit has been issued, you may also need to submit	
If incorporating additional Release(s) into the Disposal Site, list Release Tracking	ng Number(s):
D. TIER II EXTENSION SUBMITTAL REQUIREMENTS:	
State the expiration date of the Tier II Classification or Waiver for the Disposal Site, w	rhichever is applicable:
Attach a statement summarizing why a Permanent or Temporary A Tier II Extension is affective for a period of one year beyond the cu	
E. TIER II TRANSFER SUBMITTAL REQUIREMENTS:	
State the proposed effective date of the change in person(s) undertaking Response	Actions at the Disposal Site:
Attach a statement summarizing the reasons for the proposed ch All Response Actions must be completed by the deadline applicable to the p Disposal Site or received a Wa	ereon who first filed either a Tier Classification Submittal for the

Revised 4/6/95

Supersedes Forms BWSC-010 (in part) and 014 Do Not Alter This Form

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Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC-107A

TIER CLASSIFICATION, TIER II EXTENSION & TIER II TRANSFER TRANSMITTAL FORM

Pursuant to 310 CMR 40.0510 and 40.0560 (Subpart E)

r en	COS	e macking	Numbe
4	-	16565	

F. DISPOSAL SITE COMPLIANCE HI	STORY SUMMARY:		
 If providing either a Tier Classification S Section J must provide a Compliance His If providing a Tier II Extension Submitta effective date of the Tier II Classification. 	tory. I for a Tier II Site, the person nar	ned in Section J must update their C	ompliance History since the
> If providing a Tier II Transfer Submittal (de a Compliance History.
Compliance History for (provide only one na	ne per History): American	Auto Auction	
Check here if there has been no change	e to the Compliance History of the	person named above (Extension Sub-	nittal for a Tier II Site ONLY).
List all permits or licenses that have been iss	sued by the Department that are re	elevant to this Disposal Site:	
PROGRAM:	PERMIT NUMBER:	PERMIT CATEGORY:	FACILITY ID:
Air Quality			
Hazardous Waste (M.G.L. c. 21C)	11000349825	SQG	MAD985307 958
Solid Waste			
Industrial Wastewater Management	130140	BWP-1W-29	NA
Water Supply			
Water Pollution Control/Surface Water			
Water Pollution Control/Groundwater			
Water Pollution Control/Sewer Connection		* 100,0 The control of the control o	<u> </u>
Wetland & Waterways			
List all other Federal, state or local permits,	liannene madificatione maintention	is imponent or appropriately that are enter	want to this Disassal Cita
ISSUING AUTHORITY OR PROGRAM.		IDENTIFICATION NUMBER:	DATE ISSUED:
If needed, attach to this Transmittal Form a the compliance history of the person named	statement further describing the C		
(1) DEP regulations; and (2) other laws for the protection of health.	, safety, public welfare and the env	ironment administered or enforced by	any other government agency.
Such a statement should identify information	such as:		
 (1) actions relevant to the Disposal Site to Noncompliance (NON), Notice of Interior an administrative enforcement order; (2) administrative consent orders; (3) judicial consent judgements; (4) similar administrative actions taken by (5) civil or criminal actions relevant to the (6) any additional relevant information. 	nt to Ássess Civil Administrative P other Federal, state or local agen	enalty (PAN), Notice of Intent to Take	Response Action (NORA), and
For each action identified, provide the following	ing information:		
(1) name of the Issuing authority, type of (2) description of noncompliance cited; (3) current status of the matter; and	áction, identification number and o	tate issued;	

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(4) final disposition, if any.



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TIER CLASSIFICATION, TIER II EXTENSION & TIER II TRANSFER TRANSMITTAL FORM

Pursuant to 310 CMR 40.0510 and 40.0560 (Subpart E)

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G. CERTIFICATION OF ABILITY AND WILLINGNESS:

> If providing either a Tier II Classification Submittal or a Tier II Extension Submittal, the person who signs this certification MUST be the person named in Section J, or that person's agent.

> If providing a Tier II Transfer Submittal, the person who signs this certification MUST be the person named in Section M, or that person's agent.

t attest under the pains and penalties of perjury that (i) I/the person(s) or entity(ies) on whose behalf this submittal is made has/have personally examined and am/is familiar with the requirements of M.G.L. c. 21E and 310 CMR 40.0000; (ii) based upon my inquiry of the/those Licensed Site Professional(s) employed or engaged to render Professional Services for the disposal site which is the subject of this Transmittal Form and of the person(s) or entity(ies) on whose behalf this submittal is made, and my/that person's(s') or entity's(ies') understanding as to the estimated costs of necessary response actions, that/those person(s) or entity(ies) has/have the technical, financial and legal ability to proceed with response actions for such site in accordance with M.G.L. c. 21E, 310 CMR 40,0000 and other applicable requirements; and (iii) that I am fully authorized to make this attestation on behalf of the person(s) or entity(ies) legally responsible for this submittal. Whe person(s) or entity(ies) on whose behalf this submittal is made is aware of the requirements in 310 CMR 40.0172 for notifying the Department in the event that l/the person(s) or entity(ies) on whose behalf this submittal is made learn(s) that il/they is/are unable to proceed with the necessary response actions.

Ву:	Michael Schald	Title: Rassistant General Manager.	
,.	(signature)	0/-/	
For:	American Auto Auction	Date: 9//3/02	
	(print name of person or entity recorded in Section J or M, as approp	uniate)	

If you are submitting either a Tier II Extension Submittal for a Walver Site or a Tier II Transfer Submittal for a Walver Site, you may choose to sign the alternative Ability and Willingness Certification found in Section H in place of providing the certification in Section G and the LSP Opinion in Section I.

H. ALTERNATIVE CERTIFICATION OF ABILITY AND WILLINGNESS:

- > If providing a Tier II Extension Submittal for a Waiver Site, the person who signs this certification MUST be the person named in Section J, or that person's agent
- If providing a Tier II Transfer Submittal for a Waiver Site, the person who signs this certification MUST be the person named in Section M, or that person's agent.

I attest under the pains and penalties of perjury that (i) lithe person(s) or entity(ies) on whose behalf this submittal is made has/have personally examined and am/is familiar with the requirements of M.G.L. c. 21E and 310 CMR 40.0000; (ii) based upon my inquiry of the Consultant-of-Record for the disposal site which is the subject of this Transmittal Form and of the person(s) or entity(ies) on whose behalf this submittal is made, and my/that person's(s') or entity's(ies') understanding as to the estimated costs of necessary response actions, that/those person(s) or entity(ies) has/have the technical, financial and legal ability to proceed with response actions for such site in accordance with M.G.L. c. 21E, 310 CMR 40.0000 and other applicable requirements; and (iii) that I am fully authorized to make this attestation on behalf of the person(s) or entity(ies) legally responsible for this submittal. Vithe person(s) or entity(ies) on whose behalf this submittal is made is aware of the requirements in 310 CMR 40,0172 for notifying the Department in the event that I/the person(s) or entity(ies) on whose behalf this submittal is made learn(s) that it/they is/are unable to proceed with the necessary response actions.

Ву:	(signature)	Title:
For:	(print name of person or entity recorded in Section J or M, as appropriate)	Date:

I. LSP OPINION:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and (iii) the provisions of 309 CMR 4.03(5), to the best of my knowledge, information and belief,

- > if Section B of this form indicates that a Tier I or Tier II Classification Submittal which relies upon a previously submitted Phase I Completion Statement is being submitted, this Tier Classification Submittal has been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000;
- > if Section B of this form indicates that a Phase I Completion Statement or a Tier I or Tier II Classification Submittal which does not rely upon a previously submitted Phase I Completion Statement is being submitted, the response action(s) that is (are) the subject of this submitted (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40,0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

SECTION I IS CONTINUED ON THE NEXT PAGE



I. LSP OPINION:

(continued)

Massachusetts Department of Environmental Protection

BWSC-107A

Bureau of Waste Site Cleanup

TIER CLASSIFICATION, TIER II EXTENSION & TIER II TRANSFER TRANSMITTAL FORM

Pursuant to 310 CMR 40.0510 and 40.0560 (Subpart E)

Release Tracking Number

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> if Section B of this form indicates that a Tier II Extension Submittal or a Tier is (are) the subject of this submittal (i) is (are) being implemented in accordance v (ii) is (are) appropriate and reasonable to accomplish the purposes of such responded 310 CMR 40.0000, and (iii) complies(y) with the identified provisions of all ordinary.	with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, use action(s) as set forth in the applicable provisions of M.G.L. c. 21E
I am aware that significant penalties may result, including, but not limited to, possible false, inaccurate or materially incomplete.	ble fines and imprisonment, if I submit information which I know to
Check here if the Response Action(s) on which this opinion is based, if any, by DEP or EPA. If the box is checked, you MUST attach a statement identify	
LSP Name: Matthew E. Hackman LSP #: 9456 Telephone: 401-737-9211 Ext.:	ming the applicable provisions thereof. Stamp:
FAX: (optional) 401-723-1362	
Signature: Matth Elferden Date: 6 September 2002	STE PRUTE
J. PERSON MAKING SUBMITTAL: (For Transfer Submittals describe po	erson currently undertaking response actions, not transferee)
Name of Organization: American Auto Auction	
	Tile: Assistant General Manager/Controlle
Street: 123 Williams Street	
	State: MA ZIP Code: 02764
Telephone: 508-294-2582 Ext.:	FAX: (optional)
K. RELATIONSHIP TO DISPOSAL SITE OF PERSON MAKING SUB	MITTAL: (check one)
RP or PRP Specify: W Owner Operator Operator	Transporter Other RP or PRP:
Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by	M.G.L. c. 21E, s. 2)
Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5	(i))
Any Other Person Making Submittal Specify Relationship:	
L. CERTIFICATION OF PERSON MAKING SUBMITTAL:	
Charles Pollina Michael Schaet Grest under the paint familiar with the information contained in this submittal, including any and all docu of those individuals immediately responsible for obtaining the information, the mat knowledge and belief, true, accurate and complete, and (iii) that I am fully authorize this submittal. Whe person or entity on whose behalf this submittal is made am/is possible fines and imprisonment for wilffully submitting false, inaccurate, or incomplete.	rerial information contained in this submittal is, to the best of my required to make this attestation on behalf of the entity legally responsible for aware that there are significant penalties, including, but not limited to, update information.
By: // hichael feball	Title:American Auto Auction
(signature) For Charles Pollina Michael Schefer	Date: 9/13/02
(print name of person or entity recorded in Section J)	, , , , , , , , , , , , , , , , , , , ,
Enter address of the person providing certification(s), including Ability and Willing recorded in Section J:	ness Certification where applicable, if different from address
Street:	
City/Town:	State: ZIP Code:
Telephone: Ext.:	FAX: (optional)

YOU MUST COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE, AND YOU MAY INCUR ADDITIONAL COMPLIANCE FEES.

Revised 4/6/95

Supersedes Forms BWSC-010 (in part) and 014 Do Not Alter This Form

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BWSC-107B

Bureau of Waste Site Cleanup

TIER CLASSIFICATION, TIER II EXTENSION & TIER II TRANSFER TRANSMITTAL FORM

Release Tracking Number 16565

Pursuant to 310 CMR 40.0510 and 40.0560 (Subpart E)

Only c	omplete and submit this page if you are providing a Ti	er II Transfer Submittal for a Tier II Site or a Waiver Site.
M. PERSO	N WHO IS TRANSFEREE:	
Name of Orga	enization:	
Name of Con	tact:	Title:
Street:		
City/Town: _		State: ZIP Code:
Telephone:	Ext.:	FAX: (optional)
N. RELATI	ONSHIP TO DISPOSAL SITE OF PERSON WHO IS TRA	NSFEREE: (check one)
RP or PF	RP Specify: Owner Operator Generator	Transporter Other RP or PRP:
Fiducian	, Secured Lender or Municipality with Exempt Status (as defined by	/ M.G.L. c. 21E, s. 2)
Agency (or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5	5(j))
Any Othe	er Person Who is Transferee Specify Relationship:	
	ICATION OF PERSON WHO IS TRANSFEREE:	is and penalties of perjury (i) that I have personally examined and am
familiar with the inquiry of the my knowledge responsible for	ne information contained in this submittal, including any and all docu se individuals immediately responsible for obtaining the information, e and belief, true, accurate and complete, and (iii) that I am fully auti	uments accompanying this transmittal form, (ii) that, based on my the material information contained in this submittal is, to the best of horized to make this attestation on behalf of the entity legally al is made am/is aware that there are significant penalties, including,
Ву:		Title:
(signatur	e)	
For:	me of person or entity recorded in Section M)	Date:
Street:	of the person providing certification, if different from address record	
	Ext.:	
	MUST COMPLETE ALL RELEVANT SECTIONS OF TH INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FO A REQUIRED DEADLINE, AND YOU MAY INC	IS FORM OR DEP MAY RETURN THE DOCUMENT AS ORM, YOU MAY BE PENALIZED FOR MISSING



Bureau of Waste Site Cleanup

BWSC-108

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Release Tracking Number

DEP FORM & PHASE I COMPLETION STATEMENT Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)	4 - 16565
A. SITE LOCATION: Site Name: (optional) American Auto Auction	त श्रेश श्रेश श्रे
. 123 Williams Street Route 4	end Tremont Street
North Dighton 02764-000	SEP 3 2002
City/Town: ZIP Code: Related Release Tracking Numbers that this Form Addresses:	
	DEP
Tier Classification: (check one of the following) Tier IA Tier IB Tier IC II Tier IC III Tier IC II Tier IC III Ti	er II SOUTH MANTTHAT COMMUNISITIED —
B. THIS FORM IS BEING USED TO: (check all that apply)	
Submit a Phase I Completion Statement, pursuant to 310 CMR 40.0484 (complete Sections A, B, C, G, H, I and	d J).
Submit a Phase II Scope of Work, pursuant to 310 CMR 40.0834 (complete Sections A, B, C, G, H, Fand J).	
Submit a final Phase II Comprehensive Site Report and Completion Statement, pursuant to 310 CMR 40.08 (complete Sections A, B, C, D, G, H, I and J).	36
Submit a Phase III Remedial Action Plan and Completion Statement, pursuant to 310 CMR 40,0862 (complete Sections A. B. C. G. H. I and J).	
Submit a Phase IV Remedy Implementation Plan, pursuant to 310 CMR 40.0874 (complete Sections A, B, C, I	G, H, I and J).
Submit an As-Built Construction Report, pursuant to 310 CMR 40.0875 (compléte Sections A, B, C, G, H, I an	nd J).
Submit a Phase IV Final Inspection Report and Completion Statement, pursuant to 310 CMR 40.0878 and 4 (complete Sections A, B, C, E, G, H, I and J).	0.0879
Submit a periodic Phase V Inspection & Monitoring Report, pursuant to 310 CMR 40.0892 (complete Section	s A, B, C, G, H, I and J).
Submit a final Phase V Inspection & Monitoring Report and Completion Statement, pursuant to 310 CMR 4 (complete Sections A, B, C, F, G, H, I and J).	
You must attach all supporting documentation required for each use of form indicated, inc any Legal Notices and Notices to Public Officials required by 310 CMR 40.140	
C. RESPONSE ACTIONS:	32
Check here if any response action(s) that serves as the basis for the Phase submittal(s) involves the use of Innov interested in using this information to create an Innovative Technologies Clearinghouse.)	ative Technologies. (DEP is
Describe Technologies:	· · · · · · · · · · · · · · · · · ·
D. PHASE II COMPLETION STATEMENT:	
Specify the outcome of the Phase II Comprehensive Site. Assessment:	
Additional Comprehensive Response Actions are necessary at this Site, based on the results of the Phase II Com	prehensive Site Assessment.
The requirements of a Class A Response Action Outcome have been met and a completed. Response Action Outwill be submitted to DEP.	tcome Statement (BWSC-104)
The requirements of a Class B Response Action Outcome have been met and a completed Response Action Outwill be submitted to DEP.	come Statement (BWSC-104)
Rescoring of this Site using the Numerical Ranking System is necessary, based on the results of the final Phase	It Report.
E. PHASE IV COMPLETION STATEMENT:	
Specify the outcome of Phase IV activities:	
Phase V operation, maintenance or monitoring of the Comprehensive Response Action is necessary to achieve a (This site will be subject to a Phase V Operation, Maintenance and Monitoring Annual Compliance Fee.)	Response Action Outcome.
The requirements of a Class A Response Action Outcome have been met. No additional operation, maintenance ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement (BWS DEP.	
The requirements of a Class C Response Action Outcome have been met. No additional operation, maintenance ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement (BWS)	

Revised 3/30/95

DEP.

SECTION E IS CONTINUED ON THE NEXT PAGE
Supersedes Forms BWSC-010 (in part) and 013
Do Not Alter This Form

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Bureau of Waste Site Cleanup

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Release Tracking Number

505000000000000000000000000000000000000	FORM & PHASE I				4 - 16565
£	Pursuant to 310 CMR 40	.0484 (Subpart D) a	nd 40.0800 (Subpart	H)	
E. PHASE IV COMPLET	TION STATEMENT: (c	ontinued)			
necessary to ensure that	Class C Response Action O at conditions are maintained nent (BWSC-104) will be su	and that further progres			
Indicate whether the op	peration and maintenance wi	ill be Active or Passive.	(Active Operation and M	faintenance is defined a	it 310 CMR 40.0006.);
Active Operation a	and Maintenance		Passive Operation	and Maintenance	
(Active Operation and	Maintenance makes the Site	subject to a Post-RAO	Class C Active Operation	n and Maintenance And	iual Compliance Fee.)
F. PHASE V COMPLET	ION STATEMENT:				
Specify the outcome of Phase The requirements of a C will be submitted to DEF	Class A Response Action Ou	utcome have been met a	and a completed Respon	ise Action Outcome Sta	tement (BWSC-104)
	Class C Response Action O he Response Action Outcon				
necessary to ensure that	Class C Response Action Ou at conditions are maintained nent (BWSC-104) will be sut	and that further progres			
Indicate whether the op	peration and maintenance w	ill be Active or Passive.	(Active Operation and M	Maintenance is defined a	it 310 CMR 40,0006.):
Active Operation a	and Maintenance		Passive Operation	and Maintenance	
(Active Operation and	Maintenance makes the Site	e subject to a Post-RAO	Class C Active Operation	on and Maintenance And	iual Compliance Fee.)
I attest under the pains and princluding any and all docume care in 309 CMR 4.02(1), (ii) knowledge, information and bindicates that is that is (are) the subject of this and 310 CMR 40.0000, (ii) is provisions of M.G.L. c. 21E arthis submittal; > If Section B indicates that is that is (are) the subject of this 40.0000, (ii) is (are) appropria M.G.L. c. 21E and 310 CMR-submittal; > If Section B indicates that is action(s) that is (are) the subject of this 40.0000, (ii) is (are) appropria M.G.L. c. 21E and 310 CMR-submittal; CMR 40.0000, (ii) is (are) app of M.G.L. c. 21E and 310 CM submittal. I am aware that significant pe be false, inaccurate or material.	ints accompanying this submithe applicable provisions of elief, a Phase I, Phase II, Phase is submittal (i) has (have) bee (are) appropriate and reason of 310 CMR 40.0000, and (iii) a Phase II Scope of Work (a Phase II Scope o	nital. In my professional 309 CMR 4.02(2) and (III, Phase IV or Phase in developed and impleinable to accomplish the lift) complies(y) with the or a Phase IV Remedy in developed in accordate plish the purposes of sure with the identified professional professional implemented in accomplish the purpose as(y) with the identified profession w	al opinion and judgment to 3), and (iii) the provision of the provision of the provision of all orders, per accordance with the applicable provisions of all orders.	passed upon application of sof 309 CMR 4.03(5), it int is being submitted, the search of the applicable provisions action(s) as set forth ill orders, permits, and a search of M.G.L. c. 2 as set forth in the applicants, and approvals identify and approvals identified approvals identified and approva	of (i) the standard of on the best of my he response action(s) ions of M.G.L. c. 21E in in the applicable porovals identified in seponse action(s) 1E and 310 CMR ble provisions of tified in this smitted, the response I.G.L. c. 21E and 310 applicable provisions dentified in this
by DEP or EPA. If the t LSP Name: Matthew I	onse Action(s) on which this box is checked, you MUST a E. Hackman				d/or approval(s) issued
Telephone: 401-737	1-9511	Ext.:		JS MATTING	<i>72?</i>
FAX: (optional) 401-7	32-1362		Stamp:	B Machini	
Signature:	-Elfurku			1 10 V650 C	LE
Date: 6 Say to	who 2002				

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Bureau of Waste Site Cleanup

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Release Tracking Number

Pursuant to 310 CMR 40:0484 (Subpart D) and 40:0800 (Subpart H)

	TOT (Support D) and	vo.ocoo (ocopenti))
H. PERSON UNDERTAKING RESPONSE ACTION Name of Organization: American Auto Auco Auco Auco Auco Auco Auco Auco Auc			
Name of Contact: Charles Pollina Mi	chael Schaefe	Title: Assista	int General Manager /controlle
Street 123 Williams Street			
City/Town: North Dighton		State: MA	ZIP Code: 02764
Telephone: 401-294-2582	Ext.:		
Check here if there has been a change in the person	undertaking the Respons	e Action.	
I. RELATIONSHIP TO SITE OF PERSON UNDER	TAKING RESPONSE	ACTION(S):	(check one).
RP or PRP Specify: Owner Operator	○ Generator ○ T	ransporter Other RP	or PRP:
Fiduciary, Secured Lender or Municipality with Exem	pt Status (as defined by f	1.G.L. c. 21E, s. 2)	
Agency or Public Utility on a Right of Way (as define	d by M.G.L. c. 21E, s. 5(j)	
Any Other Person Undertaking Response Action S	Specify Relationship:		
I Charles Pollina Michael Shael familiar with the information contained in this submittal, inc of those individuals immediately responsible for obtaining knowledge and belief, true, accurate and complete, and (ii this submittal. Whe person or entity on whose behalf this possible fines and imprisonment, for willfully submitting to the content of content of person or entity recorded in Section His Enter address of the person providing certification, if differently forms: City/Town: Telephone:	stiding any and an double the information, the mater in that I am fully authorize submittal is made anvis a lise, inaccurate, or incomplete the submittal is made anvis a lise, inaccurate, or incomplete the submittal is made anvis a lise, inaccurate, or incomplete the submitted in the submitted	ents accompanying this information contains of to make this attestatic ware that there are significant information. Title: Assistation Date:	a transmittation, (ii) in all, based of my inquiry ed in this submittal is, to the best of my inquiry ed in this submittal is, to the best of my on behalf of the entity legalty responsible for nificant penalties, including, but not limited to, at General Manager 9/13/02 ZIP Code:
YOU MUST COMPLETE ALL RELEVANT INCOMPLETE. IF YOU SUBMIT A	SECTIONS OF THIS	FORM OR DEP MAN	AY RETURN THE DOCUMENT AS

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1.0 INTRODUCTION

This Phase I report was performed to fulfill the requirements of a Phase I Initial Site Investigation pursuant to the provisions of the Massachusetts Contingency Plan (MCP), specifically 310 CMR 40.0483 and pursuant to the Massachusetts Oil and Hazardous Materials Release and Prevention Act (MGL Chapter 21E). This report was prepared in association with release tracking number (RTN) 4-16565 for the property located at 93-123 Williams Street, Dighton, Massachusetts (Site) (Sec Figures 1 and 2).

This Phase I Initial Site Investigation was conducted to evaluate environmental conditions associated with the release of dielectric fluids from transformers, which were destroyed during a fire on September 15, 2001. Information regarding the regulatory history of this release and parties undertaking response actions is summarized below:

Release Notification Date: September 15, 2001

Release Tracking Number: 4-16565

Compliance Status: Unclassified- No Phase

Site Operator: Charles Pollina

Assistant General Manager American Auto Auction 123 Williams Street

North Dighton, MA 02724

Current Licensed Site Professional: Matthew E. Hackman, LSP No. 9456

SAGE Environmental, Inc. 172 Armistice Boulevard Pawtucket, RI 02860

Other RTNs pertaining to the property: 4-16839

1.1 Background

A fire began Saturday night, September 15, 2001, destroying a three-story building known as the Taunton Expo – a large flea market for approximately 250 vendors. SAGE Environmental, Inc. (SAGE) arrived on-site Sunday, September 16, 2001, at approximately 12:00 p.m. after receiving a telephone call from property representative, Mr. Charles Pollina, to assist with Massachusetts Contingency Plan (MCP), Licensed Site Professional (LSP), and Emergency Response Oversight services. Within the burned building were electrical transformers, voltage regulators, and switchgear containing dielectric fluids ("transformer oils"). For convenience, this equipment will hereafter be referred to as "transformers." Field testing of transformer oils by representatives of the Massachusetts Department of Environmental Protection (MADEP) suggested that some

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of the oils contained greater than 50 parts per million (ppm) of polychlorinated biphenyls (PCBs).

Subsequent laboratory analysis confirmed that one of these oils had PCB concentrations of over 95% PCBs. All known transformers and electrical equipment were emptied of their remaining contents into segregated 55-gallon drums. All of the transformers and electrical units were secured by wrapping them in 6-mil polyethylene plastic in anticipation of eventual disposal.

Based on available equipment labels and volume estimation, it is SAGE's opinion that approximately 600 gallons of dielectric fluid was associated with this equipment. Approximately 100 gallons of oil was recovered. Assuming all units were initially full, approximately 500 gallons of oil may have been released from these units to the environment. The oil appears to have been transported by way of a large volume of water that was applied to the building for fire suppression purposes. It appears that the oil was released during the fire as a result of the building collapsing on the transformer units and / or their being grabbed by an excavator-mounted grappling arm. Additionally, it appears that the oil was transported via storm water running across the parking lot and into drainage culverts and swales, which discharge into a constructed drainage swale or ditch (shown as an intermittent stream on the United States Geological Survey quadrangle map) east of the parking lot. This constructed swale or ditch discharges to wetlands located approximately \(^{1}\)4 of a mile south of the release location.

SAGE personnel followed the constructed swale or drainage ditch for approximately ¼ of a mile. There appeared to be an approximate 1,000-foot stretch of swale or ditch bottom that was visibly impacted with a probable mix of oil from the transformers, ash from the fire, and possibly, regular parking lot runoff. This visible impact had a black and greasy appearance that extended approximately one to two inches into the streambed. Laboratory results of this visibly impacted soil revealed PCBs of less than 1 parts per million (ppm) for all but one sample. A sediment sample collected at the farthest area of known separate phase oil extent exhibited a total PCB concentration of approximately 11.8 ppm. PCB content in water from the stream has ranged from non-detect (< 0.30 part per billion (ppb)) to 15 ppb.

Immediate Response Actions (IRA) commenced on September 16, 2001. Separate phase oil was contained with oil absorbent pads and booms in the stream and drainage swale. Oil saturated pads and booms were changed out and replaced on September 18, 2001 and November 16, 2001. The booms were removed for disposal by Frank Corporation on July 26, 2002..

Based on a Site meeting on September 20, 2001 with MADEP and U.S. Environmental Protection Agency (EPA) representatives, the PCB soil/sediment IRA objective for the

Site was determined to be 1.0 ppm (a.k.a., 1,000 μ g/Kg) or less, and the groundwater objective is 0.5 ppb. Verbal approval was granted by the EPA and MADEP to remove the top two inches of sediment and/or obvious transformer oil stained soils from the constructed drainage channel and associated feeder swales.

Beginning October 2, 2001 and continuing through November 16, 2001, the top two inches of sediment were excavated from the drainage channel, banks, and associated feeder swales by Frank Corporation of New Bedford, Massachusetts. Excavation was performed primarily by hand using shovels and buckets. A backhoe with blade and/or a BobcatTM with front bucket was used where the channel areas were accessible. Materialwas stored temporarily on Site in 20-yard steel rolloffs lined with plastic. Confirmatory samples were collected at approximate 50-foot intervals from the center of each excavated channel or swale. Sample locations were marked with stakes which were located using the global positioning system (GPS). These samples were submitted to a Massachusetts-certified laboratory for PCBs analyses via EPA Method 8082. Additionally, background sediment samples for extractable petroleum hydrocarbons (EPH) analysis were collected from 12 locations in adjacent drainage channels, which were not impacted by runoff from the fire. Post-excavation sediment samples for EPH analysis were collected from eight channel locations, which were previously sampled in September 2001, prior to excavation. The results of these IRA activities and additional investigations are described in Section 3.0 of this report.

On January 21, 2002, a separate release of 100 gallons of diesel fuel occurred on the Site when a pump failed on a temporary above-ground storage tank (AST). Release Tracking Number 4-16839 was assigned to the spill. ENPRO of Newburyport, Massachusetts, was contracted to conduct response actions. Diesel fuel was noted to have impacted snow, ice, and asphalt around the temporary AST. No diesel fuel impacts were noted in soil areas beyond the edge of the asphalt pavement. ENPRO captured liquids from the spill area with a vacuum truck. Snow and ice were removed from the area and placed in a lined 20 cubic yard roll-off container. Sorbents were placed over the spill area and removed using a backhoe and a Bobcat. Waste liquids were subsequently shipped under manifest to ECC in Stoughton, Massachusetts for disposal. The roll-off with 11.96 tons of diesel-impacted sorbents was transported under Bill of Lading to EMI in South Portland, Maine. Based on visual inspection, ENPRO noted no potential impacts to soil or groundwater. On this basis, a Class A-1 Response Action Outcome (RAO) was filed for the release on March 18, 2002. A copy of the RAO report is attached as Appendix 1.

2.0 SITE DESCRIPTION

The Site includes the area of the former Taunton Expo Building, the downslope parking lot areas to the east of the Expo Building, and an intermittent stream which extends downstream



from the parking lot for approximately 3,000 fcet. The total site area is approximately 10 acres. The Site is located on property, which incorporates portions of four lots. The Site latitude and longitude are 41° 52' 33' and 71° 9' 53", respectively. The UTM coordinates are 320355.677 and 4638040. A Site Location Map is included as **Figure 1** and a plat map is included as **Figure 2**. A Site Plan, which depicts major Site features, is attached as **Figure 3**. The approximate Site boundaries are depicted on **Figure 2**.

The Site currently contains a small one-story auto reconditioning building and a paved parking lot used for wholesale auto auctioning. A filled foundation for the former Taunton Expo Building is located at the west side of the Site. This building was destroyed by fire on September 16, 2001. The east portion of the Site contains woodland and a constructed drainage ditch with an intermittent stream. The woodland area is isolated from the paved parking lot by a chain link fence.

The number of workers at the Site is typically ten. These workers include automotive reconditioning technicians, security personnel, and vehicle drivers.

2.1 Surrounding Area Description

The Site is bound by a vacant lot to the north and undeveloped woodland to the east. To the south is an automotive auction building and an office used by the American Auto Auction. Williams Street bounds the Site to the west. A single-family residence is located to the northwest of this Williams Street approximately 350 feet from the Site boundary.

Because a residence is located within 500 feet of the Site, pursuant to 310 CMR 40.0361, the applicable MCP soil reporting category is "RCS-1". Because the Site is not located within a current or potential drinking water source area, the applicable reporting category for groundwater is "RCGW-2".

The Site is not located within the Interim Wellhead Protection area or Zone II for two municipal wells located approximately 1,800 feet west of the Site, or within any other current or potential drinking water source area. However, the northern portion of the Site falls within 30 feet of an existing occupied building. Pursuant to 310 CMR 40.0932(2), the applicable Method 1 standard for groundwater is "GW-2". The Site contains an intermittent stream which is not located within the Zone A of a Class A surface water body, however this stream discharges to a Zone A surface water supply located 4,000 feet downstream. According to the MCP, groundwater at all Sites is considered a potential source of discharge to surface waters and shall be additionally categorized "GW-3".

According to demographic data obtained from Boston Globe Publishing, the residential population within one-half mile of the Site is estimated to be 98 people (based on the 2000

Census). There are no institutions (as defined in 310 CMR 40.0006) within 500 feet of the Site.

2.2 Municipal Sources

SAGE contacted and made inquiries of the following agencies in an effort to further evaluate land usage, natural resource areas, drinking water supplies or areas of critical environmental concern:

- The Dighton Tax Assessor's Office
- The Dighton Town Clerk's Office
- The Dighton Health Department
- The Dighton Fire Prevention Office
- > The Dighton Building Department
- The Dighton Conservation Commission
- > The Taunton Conservation Commission
- > The Environmental Data Resources
- > The Massachusetts Department of Environmental Protection
- Datamap Technology Corporation

2.3 Local Natural Resources

Based on a review of the Massachusetts Geographic Information System (MassGIS) Site Scoring Map, the Site is not located within a current or potential drinking water source area. The Site contains an intermittent stream and bordering vegetated wetlands. The stream was observed by SAGE to contain a small population of fish including red pickerel (*Esox americanus*). The stream is not located within the Zone A of a Class A surface water body, however, this stream discharges to a Zone A surface water supply located on the Segreganset River 4,000 feet downstream. A copy of the MassGIS Map is included as **Figure 5**.

The Site and surrounding areas are connected to municipal sewer and water services available from the Town of Dighton.

2.4 Site History

Historical information pertaining to Site property and surrounding properties was obtained from various sources throughout this investigation including local and state governmental agencies and conversations with the former property owner. Data is summarized below.

2.4.1 Owner/Operator History

Ownership chronology was derived from information made available at the Dighton Assessor's Office and summarized in **Table 1**. The data was reviewed for the purpose of land use determination. This information should not be relied on as a complete chain-of-title.

Table 1
Ownership Chronology
93-123 Williams Street
Dighton, Massachusetts

LOT 18B-03		
Grantee	Date of Acquisition	Book/Page
Taunton Greyhound Association	None	NA
Merchandise Pavilion Inc.	9/28/89	NA
NE Auto Auction	7/2/01	NA
LOT 18B-04		
Grantee	Date of Acquisition	Book/Page
Merchandise Pavilion Inc.	9/28/89	NA
NE Auto Auction	7/2/01	NA
LOT 20-01		***************************************
Grantee	Date of Acquisition	Book/Page
Taunton Greyhound Association	11/14/78	NA
Rehoboth Fair	10/6/89	NA
William Desmond	3/4/92	NA
NE Auto Auction	3/4/92	NA
LOT 20-02A		
Grantee	Date of Acquisition	Book/Page
Rehoboth Fair	3/4/92	NA
William Desmond	3/4/92	NA
Taunton Dog Track	3/4/92	NA
William Desmond	7/17/92	NA

NA = Not Availablė

Inquiries were made to Environmental Data Resources, Inc. (EDR) concerning historic map coverage of the subject property. EDR maintains a collection of historic Sanborn Maps for fire insurance purposes. However, the information provided by EDR indicates the Site lies in a "no coverage" area.

2.4.2 Documented Area Releases

SAGE conducted a radius search review of surrounding geocoded properties of potential environmental concern utilizing software developed by DataMap Technology Corporation. The software allows access to state and federal databases relative to documented releases of oil or hazardous materials. A copy of the DataMap report is included in **Appendix 2**.

Information was requested for four off-Site releases, which would appear to have the potential for negative impacts to the Site. Information made available at MADEP Southeast Regional Office in Lakeville, Massachusetts is summarized below. Copies of pertinent documents are included in **Appendix 3**.

Lopes Construction
565 Winthrop Street
Taunton, Massachusetts
S91-0347
Approximately 1,700 feet northeast of the Site

Although a spill is registered for this address, the MADEP could not locate files regarding this release at the time of SAGE's inquiry. This site could potentially have adverse impacts to the subject Site because the Lopes Construction is located adjacent to a drainage swale system which discharges to the intermittent stream located on the subject Site.

Indian Ridge Condominiums
701Winthrop Street
Taunton, MA
RTN 4-1317
Approximately 2,000 feet northwest of the Site

Based on data obtained from test pits and borings conducted by Goldberg Zoino Associates (GZA) in 1993, "hazardous materials" in the form of low levels of arsenic, cadmium, and selenium were identified in fill material at this site. Tolucne, ethylbenzene, and xylene were detected in groundwater, however, the observed concentrations were below the draft MCP reportable concentrations. The absence of dissolved metals in groundwater was attributed by GZA to indicate that metals contamination was not leaching from the soils into the groundwater. GZA concluded that the site posed no significant threat to public health or the environment. This site is currently classified by the MADEP as Tier 1B. The Site is likely hydraulically separated from the Indian Ridge Condominium site by the Segreganset River and therefore unlikely to objectionably impact the subject Site.

Property
8 Gulliver Street
Taunton, Massachusetts
RTN No. 4-12741
Approximately 2,400 feet northwest of the Site

According to an RAO Report filed by Corporate Environmental Advisors (CEA) dated December 31, 1996, a fuel oil delivery truck overturned and released 100 gallons of fuel oil in the front yard of a residence. A total of 40 cubic yards of contaminated soil was excavated by CEA and disposed off-site. Post excavation confirmatory soil samples collected from the sidewalls and bottom of the excavation indicated that residual contaminant concentrations were below the applicable Method 1, S-1 Standards. Groundwater did not appear to be impacted by the release. CEA concluded that a Permanent Solution had been achieved and that additional response actions were not required. The Gulliver Property is likely hydraulically separated from the subject Site by the Segreganset River and, therefore, unlikely to objectionably impact the subject Site.

Segreganset Country Club
Gulliver Road
Taunton, Massachusetts
S91-0092
Approximately 2,600 feet northwest of the Site

Although a spill is registered for this address, the MADEP could not locate files regarding this release at the time of SAGE's inquiry. The Segreganset Country Club is likely hydraulically separated from the subject Site by the Segreganset River and therefore unlikely to objectionably impact the subject Site.

The release at the subject Site is described in **Section 1.1** of this report. Additional releases were not identified for the subject Site in data made available to *SAGE* at the time of this investigation.

2.4.3 Oil and/or Hazardous Material Use and Storage History

From the 1950s until 1989, the site contained a fairgrounds and a dog track. In approximately 1989, the fairgrounds was converted to a merchandise pavilion and a wholesale auto auction. Oil and hazardous materials usage during this period is inferred to have included the use of heating oils, transformer dielectric fluids, and other petroleum products.

At the time of the PCB release in September 2001, a 500-gallon underground storage tank (UST) holding #2 fuel oil was present at the north side of the Expo Building. This UST was excavated and removed from the Site on November 28, 2001. There are no recorded incidents of leakage associated with this UST.

Oil and hazardous materials storage observed at the time of this investigation include the following items:

- Waste water from floor drain runoff, stored in a 3,200-gallon polyethylene aboveground storage tank (AST) within the east side of the Recon Building.
- Four, 55-gallon drums of paint waste, stored on containment pallets within the east side of the Recon Building.
- Ten, 55-gallon drums of floor drain sludge, stored within the west side of the car wash bay in the Recon Building
- One, 400-gallon waste oil AST located at the northeast exterior of the Recon Building.

2.4.4 Waste Management History

The DataMap report, included as **Appendix 2**, identifies the American Auto Auction as a small quantity generator (SQG) of hazardous waste. Records maintained by the MADEP indicate no record of enforcement actions for this facility.

According to information provided by the owner/operator, the American Auto Auction facility typically generates approximately 650 gallons of waste oil per year. This material is transported and disposed by Clean Harbors, Inc. At least three drums of paint waste and 3,000-gallons of waste water are also generated annually. These materials are transported and disposed by Franklin Environmental Services, Inc. No information was made available pertaining to the transport and disposal of drain sludge wastes.

As of January 16, 2002, approximately 20 tons of remediation waste generated under IRA activities was transported and disposed. These wastes included non-Department of Transportation (DOT) regulated transformer oils, PCB transformer oils, PCB solid wastes and mixtures, PCB transformers, non-PCB transformers and switchgear, and approximately 100 tons of PCB-contaminated sediment and debris. This material was disposed at the CWM Hazardous Waste landfill in Model City, New York. Manifests and Certificates of Disposal are included in Appendix 4. IRA wastes generated from additional soil/sediment removal and catch basin clean outs conducted in the period from July 27 through August 2, 2002 are currently contained in 55-gallon drums staged on-site. Manifests and Certificates of Disposal for these wastes will be provided in the next IRA status report.

2.4.5 Environmental Permits and Compliance History

Documented compliance issues pertinent to the MCP have been previously summarized in Section 1.1 of this report. Additional permit and compliance records on file with the MADEP include a permit approval, dated March 10, 1997, for construction of an above-ground, non-hazardous industrial wastewater holding tank (Appendix 3). This tank was installed to store wastewater generated from a car wash located within the Recon Building. The tank was constructed to replace an existing underground wastewater holding tank which was located on the north side of the Recon Building. This former tank was reported to be leaking. According to a letter issued by Bay Colony Group, Inc. to the MADEP, "trace concentrations of solvents found in the wastewater are too low to constitute a release of contaminants". Based on SAGE's inspection of the Site it appears that this UST has been excavated and removed. A reportable release associated with this UST was not identified in MADEP records.

Registration records on file with the Dighton Fire Department indicate that the Site formerly contained one 500-gallon fuel oil UST and four propane USTs. These five tanks were excavated and removed on November 28, 2001. There are no recorded incidents of leakage associated with these USTs. Copies of Fire Department removal records are included in **Appendix 5**.

Due to the Standard Industrial Classification (SIC) codes of the onsite facilities (5012, 7521, and 7542), stormwater discharges from the Site are not subject to the current permitting requirements of the federal NPDES Stormwater Management Program, 40 CFR 122.26, or the Massachusetts Surface Water Discharge Permit program, 314 CMR 3.00.

3.0 SITE INVESTIGATIONS

3.1 Sediment Sampling

3.1.1 Pre-Excavation Sediment Sampling

During September 17 through September 20, 2001, SAGE collected twenty-seven (27) sediment/soil samples from the swales, stream channels and along the pavement perimeter, which was impacted by fire runoff. These samples were submitted to a Massachusetts-certified laboratory for analyses of PCBs via EPA Method 8082. Eight (8) of these samples were additionally analyzed for EPH using MADEP Methods. For comparison purposes, on November 2 and November 5, 2001, background sediment

samples for EPH analysis were collected from twelve (12) locations in drainage channels on the property which were not impacted by runoff from the fire.

Chain-of-Custody forms and Certificates of Analysis are included in **Appendix 6.** Pre-excavation PCB data is summarized on **Figure 6.** EPH data for the C11-C22 aromatic fraction is summarized on **Figure 8.** Laboratory results are summarized in **Tables 2** through **Table 5.**

Pre-excavation Sediment Analytical Results - PCBs 93-123 Williams Street North Dighton, Massachusetts

Method 3		5W-2	& GW-3 Soil				1000001
MADEP Method I)/I-S	& CX			unione.	2000
28888882222222222222222222222222222222		Lecense	9/20		550	688	688
	Sp.9		9/20		<50	759	759
	95. 95.	KANSILANIKI	9/20		<50	300	338
	SP-7		9/20		o\$>	169	169
	SP-6A		9/20		\$50	232	232
	SP-5		61/6		\$50 \$100	9\$	950
	Sp.	5300230C	9/19		<\$0	\$50	\$
	SP-3		9/19		0\$>	369	369
	SP-2	880:2008KN	67/6 27/6		05>	950	\$5
	<u>.</u>	99799998	61/6		3060	8780	11840*
	SW-SD		61/6		0\$>	\$	85
	SW-SC		61/6		<50	0\$>	0\$>
	SW-5B		61/6		05°	-SS	<50
m 0	SW-5A		61/6		<50	<50	<50
Concentration	SW-4C		61/6		<50	<50	<50
•	SW-4B		9/19		\$50	625	625
	SW-4A	· AAAAAAAAA	9/19		0\$>	<50	<50
	MSW-2C		61/6		<50	<\$0	<50
	MSW-2B	MARKO SEE	61/6		85.7	493	578.7
	MSW-2A MSW-2B MSW-2C		61/6		0€>	<50	<50
	2		81/6		<\$0	05>	05>
	\$ 1.50 \$		9/18		°50	0\$\frac{1}{2}	<50
	2004 2004		81/6		<50	<50	Ş0 Ş0
	FP-6	2002000	9/18		<50	~\$0 \$	<50
	NSW-I		9/17		- 4	21	21
	SSW-I MSW-I		6/17		<17	140	140
2285-3888-3821	SSW-I		9/17	3):	<17	<17	
Sample / Date			Analyte	PCB's by 8082 (ug/kg):	Aroclor 1016/1242	Aroclor 1254	Total PCB

Where necessary, the MADEP standards have been converted from ppm to ppb, or vice-versa, to match the laboratory reporting method.

<x: Indicates analyte concentration not detected at or above specified laboratory quantitation limit (x) Sample Results:</p>
 a. Analyte concentration in this sample exceeds the MADEP standard for: SI/GW1 & SI/GW3 type soil Detected concentrations are depicted on Figure 6
 SSW=South Swale
 FP=Fence Post
 MSW=Middle Swale
 NSW=North Swale
 SP=Sample Point

7

Pre-Excavation Sediment Analytical Results - EPH 93-123 Williams Street
North Dighton, Massachusetts

Sample / Depth / Date				Conce	Concentration				NADEP Mett	MADEP Method 1 Standard	MADEP Method 3
	SSW-1	MSW-1	1-ASN	SP-6A	Sp.7	90 90	6-dS	SP-16			
20000000	("1-0)			ond3000					S-1/GW-2 Soil	S-1 / GW-2 Soil S-1 / GW-3 Soil	***************************************
Analyte	1002/11/6	9/17/2001	9/17/2001	9/20/2001	9/20/2001	9/20/2001	9/20/2001	9/20/2001	quantitati		
Extractable Petroleum Hydrocarbon (EPH) (ug/kg):	ydrocarbon (E	PH) (ug/kg):									
C9-C18 Aliphatics	<13	180	4	120	011	<26	670000	880	1000	1000	20000
C19-C36 Aliphatics	86	900	2/1	220	350	35	620	1800	2500	2500	20000
C11-C22 Aromatics	340*	1300**	640*	760*	670*	69	2900*	4700**	800	000	10000
Acenaphthene	<130	991	8	260	<200	<260	999	770	0001	0001	00001
Acenaphthylene	<130	150	001>	<120	410	<260	2300	3900	001	80	00001
Anthracene	<130	260	<100	8	270	320	630	900	1000	1000	00001
Benzo[a]anthracene	390	1600**	011	260	059	1900*	019	550	700	700	100
Benzo[a]pyrenc	310	180"	001>	400	089	*00£1	<480	≪390	907	9 <u>6</u>	001
Benzo[b]fluoranthene	480	1900*	120	040	21.0	1900**	970	200	700	907	<u>80</u>
Benzo[g,h,i]perylene	170	460	×188	300	<200	<260	<480	≪3%0	0001	000	00001
Benzo[k]fluoranthene	310	950	90. 	280	089	1400	<480	<390	τ	r	400
Chrysene	640	2400	210	500	0001	1600	820	740	E	c-	400
Dibenz[a,h]anthracene	<130	230	901>	130	<200	019	<480	0865	700	700	001
Fluoranthene	1600	5200	400	0081	2300	4900	2400	2700	1000	980	200001
Fluorene	<130	260	001>	400	460	<260	1300	2000	0001	000	00001
Indeno[1,2,3-cd]pyrene	071	300	901>	<120	260	1200°	<480	<390	700	700	001
Phenanthrene	830	2700	360	1200	2200	1500	3100	4400	700	001	10000
Pyrene	1200	3900	400	1400	1800	4000	2000	2500	700	700	00001
2-Methylnaphthalene	<130	<120	<100	<120	250	<260	0011	2000	200	500	10000
Naphthalene	<130	<120	<100	<120	2000	<260	3100	5400	8	8	00001
		· · · · · · · · · · · · · · · · · · ·	,			S	,				7

Where necessary, the MADEP standards have been converted from ppm to ppb, or vice-versa, to match the laboratory reporting method.

<x: Indicates analyte concentration not detected at or above specified laboratory quantitation limit (x)</p>
 Sample Results:
 a.c.: Analyte concentration in this sample exceeds the MADEP standard for:
 a. S1/GW1 type soil
 c: S1/GW3 type soil Database information indicates, analyte concentration exceeds a RC, and as such may constitute an additional Site reporting requirement Anomatic concentrations are depicted on Figure 8
 SSW=South Swale
 FEnce Post
 MSW=Middle Swale
 NSW=North Swale
 SP=Sample Point

sage/Jobs/r r035/repurts/phase | final

------L.J.

Table 4

Background Analytical Results – EPH in Sediment North Dighton, Massachusetts Samples Collected November 2, 2001 93-123 Williams Street

BK-3 BK-4 BK-5 BK-6 S-1 / GW-2 Soil S-1 / GW-3 Soil 72/2001 11/2/2001 11/2/2001 11/2/2001 2500000 2500000 11000 <15000 <16000 2500000 2500000 33000 44000 47000 26000 800000 2500000 <110 <150 180 <160 700 700 <110 <150 170 <160 700 700 <110 <150 270 <160 7000 7000 <110 <150 270 <160 70000 100000 <110 <150 220 <160 700000 100000 <170 <150 <160 700000 70000 <170 <150 <160 700000 70000 <110 <150 <160 700000 70000 <110 <150 <160 700000 70000 <110 <150 <160 700000 7000	Sample / (Depth) / Date	00000000		Concer	Concentration			MADEP Met	MADEP Method I Standard	MADEP Method 3
Analyte III/272001		50803050						24		Soil UCL
Analyte 11/2/2001 11/2/2001 11/2/2001 11/2/2001 11/2/2001 11/2/2001 2-1 / GW-2 Soil S-1 / GW-2 Soil Hydrocarbon (EPH) (ug/kg): 18000 43000 <15000 <14000 <15000 <15000 <15000 <150000 <15000 <15000 <15000 <15000 <15000 <15000 <15000 <1500 <1600 <1500 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600 <1600		~ ~	2.78	BK-3	5-78	BK-5	9-MA			
Hydrocarbon (EPH) (ug/kg): 11/2/2001 11/2/2001 11/2/2001 11/2/2001 11/2/2000 11/2/2000 11/2/2000 11/2/2000 11/2/2000 2500000 <th></th> <th>00000000</th> <th>***************************************</th> <th></th> <th></th> <th>C82000624</th> <th></th> <th>S-1 / GW-2 Soil</th> <th>S-1 / GW-3 Soil</th> <th></th>		00000000	***************************************			C82000624		S-1 / GW-2 Soil	S-1 / GW-3 Soil	
Hydrocarbon (EPH) (ug/kg): Hydrocarbon (EPH) (ug/kg): 18000 43000 <11000	Analyte	11/2/2001	11/2/2001	11/2/2001	11/2/2001	11/2/2001	11/2/2001		36196500	
18000 43000 <11000 <15000 <14000 <15000 <14000 <15000 <15000 <15000 <15000 <15000 <15000 <15000 <15000 <15000 <15000 <15000 <15000 <15000 <15000 <1500 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <1000 <10	Extractable Petroleum Hydrocarbon (EPH) (ug/kg):									
6 7000 14000 44000 47000 26000 800000 800000 800000 800000 800000 800000 800000 800000 800000 800000 800000 800000 800000 800000 800000 700 <	C19-C36 Aliphatics	18000	43000	<11000	<15000	<14000	<16000	2500000	2500000	20000000
180 150 <110 <150 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <160 <1	C11-C22 Aromatics	97000	140000	33000	44000	47000	26000	800000	800000	10000000
120 120 110	Benzo[a]anthracene	180	150	<110	<150	180	<160	700	700	100000
4 170 <110 <150 <160 700 700 700 5 230 210 <110	Benzo[a]pyrene	120	<140	<110	<150	170	<160	700	700	100000
Composition	Benzo[b]fluoranthene	240	170	<110	<150	310	<160	007	700	100000
Accordance of the standards have been converted from phm to ppb, or vice-vcrsa, to match the laboratory reporting method. 170 begon converted from phm; so that the laboratory reporting method. 170 begon converted from phm; so that the laboratory reporting method. 170 begon converted from phm; so that the laboratory reporting method. 170 begon converted from phm; so that the laboratory reporting method. 170 begon converted from phm; so that the laboratory reporting method. 170 begon converted from phm; so that the laboratory reporting method. 170 begon converted from phm; so that the laboratory reporting method. 170 begon converted from phm; so that the laboratory reporting method. 170 begon converted from phm; so that the laboratory reporting method. 170 begon converted from phm; so the laboratory reporting method. 170 begon converted from phm; so the laboratory reporting method. 170 begon converted from phm; so the laboratory reporting method. 170 begon converted from phm; so the laboratory reporting method. 170 begon converted from phm; so the laboratory reporting method. 170 begon converted from phm; so the laboratory reporting method. 170 begon converted from phm; so the laboratory reporting method. 170 begon converted from phm; so the laboratory reporting method. 170 begon converted from phm; so the laboratory reporting method. 170 begon converted from phm; so the laboratory reporting method. 170 begon converted from phm; so the laboratory reporting method. 170 begon converted from phm; so the laboratory reporting method. 170 begon converted from phm; so the laboratory reporting method. 170 begon con	Chrysene	230	210	<110	<150	270	<160	7000	7000	400000
Administration limits 220 <110 <150 <150 <160 700000 100000 100000 Administration limits 350 370 170 <150	Fluoranthene	360	380	120	170	009	<160	1000000	1000000	10000000
Standards have been converted from ppm to ppb, or vice-vcrsa, to match the laboratory reporting method. AS AS AS AS NA	Phenanthrene	220	220	<110	<150	220	<160	700000	100000	100000000
EP standards have been converted from ppm to ppb, or vice-vcrsa, to match the laboratory reporting method. d	Pyrene	350	370	170	<150	480	<160	700000	700000	10000000
Where necessary, the MADEP standards have been converted from ppm to ppb, or vice-versa, to match the laboratory reporting method. NA: Analysis not performed ND: No analytes detected above quantitation limits	PCB's by 8082 (ug/kg):	AA	NA	NA	NA	NA	NA			
Analysis not performed No analytes detected above quantitation limits	Where necessary, the MADEP standards have been converted I	from ppm to ppb, or	r vice-versa, t	o match the la	boratory repo	rring method.				
No analytes detected above quantitation limits	NA: Analysis not performed									
 Indicate analyte concentration not detected at or above specified laboratory quantitation limit (x) 	ND: No analytes defected above quantitation limits <x: above="" analyte="" at="" concentration="" detected="" indicates="" not="" or="" p="" so<=""></x:>	ecified laboratory	mantitation li	nit (x)						

Packground Analytical Results – EPH in Sediment 93-123 Williams Street
North Dighton, Massachusetts
Samples Collected November 5, 2001

Sample / (Depth) / Date	F.A.		,	၁	Concentration		,			MADEP Method 1. Stendard	od I. Standard	MADEP Method 3 Soil
	BK-7	878	EK-9	BK-10	1 X	BK-12	PESF-2	E 55	F-W-1			
	- Andrews			малала						S-1 / GW-2 Soil	S-1/CW-3 Soil	
Analyte	11/5/2001	11/5/2001	11/5/2001	11/5/2001	11/5/2001	11/5/2001	11/5/2001	115/2001	11/5/2001			
Extractable Petroleum Hydrocarbon (EPH) (ug/kg):							NA	NA	NA .			
C19-C36 Aliphatics	00059	110000	<21000	<13000	00029	21000	The control			250000	2500000	20000000
C11-C22 Aromatics	200000*	320000*	26000	27000	260000*	53000				800000	800000	10000000
Acenaphthene	<140	<310	<210	×130	200	<170				1000,000	1000000	1000000
Anthracene	<140	<310	Q10	<130	1300	<170		S.C.O.S.		1000000	I (XXXXX)	10000000
Benzolajanthracene	320	580	<210	<130	1800*	<170		erines:		700	700	000001
Benzo[a]pyrene	210	520	<210	<130	×096	<170		C. 2015		700	700	000001
Benzo[b]fluoranthene	480		<210	<130	1300%	<170		aczeto		700	700	100000
Benzo(g,h,)perylene	<140	<310	<210	<130	340	<170	***********			100000	1000000	00000001
Benzo[k]fluoranthene	170	380	<210	0€1>	290	<170				7000	7000	400000
Chrysene	450	016	<210	<130	1700	<170		jatoha:		0007	7000	400000
Fluoranthene	1100	2300	<210	<130	4300	<170				100000	100000	10000000
Fluorene	<140	<310	<210	<130	440	<170		entra:		1000000	1000000	1,000000
Indeno[1,2,3~d]pyrene	<140	<310	O12>	<130	390	<170		esfecti		700	700	100000
Phenanthrene	540	066	<210	<130	4600	<170	522002X			700000	100000	I (XXXXXX)
Pyrane	906	1800	<210	<130	4100	<170	100000	:56800		700000	700000	10000000
(PCB's by 8682 (ug/kg):	NA NA	AA	X.	NA A	W	NA	QN.	Q	QX	S. Same		

Where necessary, the MADEP standards have been converted from ppm to ppb, or vice-versa, to match the laboratory reporting method.

With consideration to the above data, PCB impact to sediment appeared to be greatest in the downstream areas of the constructed drainage channel. Both Arochlor 1254 and Arochlor 1242 isomers were observed in laboratory findings. EPH concentrations in the streambed sediments were in excess of MADEP Method 1 soil standards, with C11-C22 aromatics being the most persistent and elevated fraction. EPH concentrations in background sediment samples are also elevated, suggesting that EPHs in the streambed sediments may be more the result of historic parking lot runoff rather than the subject transformer release.

3.1.2 Post Excavation Sediment Sampling

Following excavation of the top two inches of sediment from the drainage channels and swales, confirmatory samples were collected at approximate 50-foot intervals. Samples were additionally collected at 50-foot intervals in the channel extending approximately 200 feet downstream of the terminus of sediment excavation. Samples were collected from the center of each channel using a Teflon trowel, which was decontaminated prior to use. A total of approximately seventy-nine (79) samples were collected. Samples were submitted to a Massachusetts-certified laboratory for PCB analysis via EPA Method 8082. In addition, post-excavation sediment samples for EPH analysis were collected from the above-referenced eight (8) channel locations, which were previously sampled in September prior to excavation, and three (3) channel locations which had detected post-excavation PCBs indicating possible residual EPH impacts.

Chain-of-Custody forms and Certificates of Analysis are included in **Appendix** 7. Post excavation PCB data is summarized on **Figure** 7. Post excavation EPH data for the C11-C22 aromatic fraction is summarized on **Figure** 9. Laboratory results are summarized on the following **Tables** 6, 7, and 8.

<u>Table 6</u> Post-excavation Sediment Samples PCB Analytical Results Samples Collected October-November, 2001

Sample Location		100000000000000000000000000000000000000	PCB C	oncentration (ug/kg)			
(Depth in feet)	Arochior 1221	Aroclor 1232	Arochlor 1016/1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	Total PCBs
0-50	ND	ND	ND	ND	ND	ND	ND
50-100	ND	ND	ND	ND	ND	ND	ND
100-150	ND	ND	ND	ND	ND	,ND	ND
150-200	ND	ND	ND	ND	ND	ND	ND
200-250	ND	ND	ND	ND	ND	ND	ND
250-300 300-350	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
350-400	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
400-450	ND	ND	ND ND	ND	ND	ND ND	ND
450-500	ND	ND	ND	ND	ND	ND	ND
500-550	ND	ND	ND ND	ND	ND	ND	ND
550-600	ND	ND	ND	ND	ND	ND	ND
600-650	ND.	ND	ND	ND	ND	ND	ND
650-700	ND	ND	ND	ND	ND	ND	ND
700-750	ND	ND	.ND	ND	ND	ND	ND
750-800	ND	ND	ND	ND	ND	ND	ND
800-850	ND	ND	ND	ND	ND	ND	ND
850-900	ND	ND	ND	ND	ND	ND	ND
900-950	ND	ND	ND	ND	ND	ND	ND
950-1000	ND	ND	ND ND	ND	ND	ND ND	ND
1000-1050	ND	ND	ND	ND ND	ND ND	ND ND	ND
1050-1100	ND ND	ND ND	ND ND	ND ND	ND	ND ND	ND 41
1100-1150	ND ND	ND ND	ND ND	ND ND	61 ND	ND ND	61 ND
1150-1200 1200-1250	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
1250-1300	ND ND	ND ND	ND	ND ND	136	ND ND	136
1300-1350	ND	ND	ND	ND	91.5	ND	91.5
1350-1400	ND	ND	ND	ND	ND ND	ND	ND ND
1400-1450	ND	ND	ND	ND	ND	ND	ND
1450-1500	ND	ND	ND	ND	ND	ND	ND
1500-1550	ND	ND	ND	ND	ND	ND	ND
1550-1600	ND	ND	ND	ND	ND	ND	ND
1600-1650	ND	ND	ND	ND	ND	ND	ND
1650-1700	ND	ND	ND	ND	ND	ND	ND
1700-1750	ND	ND	ND	ND	ND	ND	ND
1750-1800	ND	ND	ND	ND	ND	ND	ND
1800-1850	ND	ND	ND	ND	ND	ND	ND
1850-1900	ND .	ND	ND	ND	ND ND	ND	ND ND
1900-1950 1950-2000	ND	ND	ND ND	ND	ND ND	ND ND	ND ND
2000-2050	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
2050-2100	ND	ND ND	ND	ND ND	ND	ND	ND
2100-2150	ND	ND	ND ND	ND	62	ND	62
2150-2200	ND	ND	ND ND	ND ND	ND ND	ND ND	ND
2200-2250	ND	ND	ND ND	ND	ND	ND	ND
2250-2300	ND	ND	ND ND	ND	ND	ND'	ND
2300-2350	ND	ND	ND	ND	ND	ND	ND
2350-2400	ND	ND	ND	ND	ND	ND	ND
2400-2450	ND	ND	ND	ND	ND	ND	ND
2450-2500	ND	ND	ND	ND	ND	ND	ND
2500-2550	ND	ND	ND	ND	ŃD	ND	ND
2550-2600	ND	ND	ND	ND	ND ND	ND	ND
2600-2650	ND	ND	ND	ND	ND ND	ND	ND
2650-2700	ND	ND	ND VS	ND ND	ND ND	ND	ND
2700-2750	ND	ND	ND ND	ND	ND ND	ND	ND
2750-2800	ND	ND NO	ND ND	ND ND	ND ND	ND ND	ND ND
2800-2850	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
2850-2900 2900-2950	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
2950-3000	ND	ND ND	ND ND	ND ND	ND	ND	ND
3000-3050	ND ND	ND ND	250	ND ND	ND ND	ND ND	250
3050-3100	ND	ND	ND ND	ND	ND ND	ND ND	ND
3100-3150	ND	ND	ND	ND ND	ND	ND ND	ND
3150-3200	ND	ND	ND ND	ND	ND	ND	ND
3200-3250	ND	ND	ND	ND ND	79.6	ND	79.6
3250-3300	ND	ND	ND	ND ND	ND	ND	ND
3300-3350	ND	ND	ND	ND	ND	ND	ND
3350-3400	ND	ND	ND	ND	ND	ND	ND
3400-3450	ND	ND	ND	ND	ND	ND	ND
.3450-3500	ND	ND	ND	ND	ND	ND	ND
3500-3550	ND	ND	ND	ND	ND	ND	ND
3550-3600	ND	ND	ND	ND	ND	ND	ND
3600-3650 (SP-1)	ND	ND	510	ND	ND	ND	510
SP-50	ND	.ND	ND	ND	ND	ND	ND
SP-100	ND	ND	ND	ND	ND	ND	ND
SP-150	ND	ND	ND	ND	ND	ND	ND
SP-200	ND	ND	ND	ND	ND	ND	ND
PE SF-4 (3200)	ND	ND	ND ND	ND	ND	ND ND	ND
PE SF-1 (3675)	ND	ND	ND ND	ND	ND	ND	ND

ND = Not Detected - Below Analytical Detection Limit (0.50 ug/kg or less)
NS = Not Sampled
Detected PCB concentrations are depicted on Figure 7

Post-excavation Sediment / Soil Analytical Results - EPHs 93-123 Williams Street North Dighton, Massachusetts Table 7

Sample / (Depth) / Date	8000333000			Concentration	tration				MADEP Method I Standard	od i Standard	MADEP Method 3
			7 2000	1 / W/ L							Soil CC
366000	- X2	E-MSW-	-SSK-	W-25-34		90 20 20 20 20 20 20 20 20 20 20 20 20 20	- A				
					00000000	กมบังโดกา			S-1/GW-2 Soil	S-1/GW-3 Soil	
Analyte	11/14/2001	11/14/2001	11/14/2001	11/14/2001	11/14/2001	11/14/2001	11/14/2001	11/14/2001			
Extractable Petroleum Hydrocarbon (EPH) (ug/kg):											
C9-C18 Aliphatics	<12000	25000	<13000	<14000	<13000	<13000	<13000	<13000	1000000	1000000	20000000
C19-C36 Aliphatics	33000	64000	24000	18000	<13000	<13000	<13000	<13000	2500000	2500000	20000000
C11-C22 Aromatics	100000	330000	94000	62000	36000	\$1000	44000	40000	800000	800000	10000000
Acenaphthene	<120	270	<130	<140	<130	<130	<130	<130	20000	1000000	10000000
Acenaphthylene	<120	210	<130	<140	<130	<130	<130	<130	000001	100000	10000000
Anthracene	<120	740	340	220	<130	<130	<130	<130	1000000	1000000	10000000
Benzo[a]anthracene	300	2600*	1,600%	75 999 7	290	360	430	320	907	7007	100000
Benzo[a]pyrene	350	2400*	1300*	800**	240	320	370	260	700	700	100000
Benzo[b]fluoranthene	440	2800*	1400%	10001	270	380	430	260	700	00/	100000
Benzo[g,h,i]perylene	240	620	340	210	<130	<130	<130	<130	1000000	1000000	10000000
Benzo[k]fluoranthene	350	2300	1400	700	220	320	380	320	7000	7000	400000
Chrysene	460	3200	1800	1200	340	470	520	400	7000	7000	400000
Dibenz[a,h]anthracene	<120	370	220	<140	<130	<130	<130	<130	700	700	100000
Fluoranthene	810	2600	2800	2000	059	1000	1000	820	0000001	1000000	10000000
Fluorene	<120	380	<130	<140	<130	<130	<130	<130	400000	1000000	10000000
Indeno[1,2,3-cd]pyrene	240	7702	440	270	<130	<130	<130	<130	700	700	100000
Phenanthrene	400	3200	1200	1100	270	460	430	370	700000	100000	10000000
Pyrene	099	4500	2300	1700	580	820	840	650	700000	700000	10000000
PCBs by 8082 (ug/L):	NA	NA A	ΑN	AA	ΝĀ	AN	Ϋ́Α	Ϋ́Α			
								7 Incommence of the commence o	A NAMES (1977)		

Where necessary, the MADEP standards have been converted from ppm to ppb, or vice-versa, to match the laboratory reporting method.

NA: Analysis not performed

ND: No analytes detected above quantitation limits

<x: Indicates analyte concentration not detected at or above specified laboratory quantitation limit (x)</p>
Sample Results:
a-c: Analyte concentration in this sample exceeds the MADEP standard for:
a: \$1/GW1 type soil
c: \$1/GW3 type soil
Aromatic concentrations are depicted on Figure 9

30

Table 8 Post-excavation Sediment / Soil Analytical Results – EPHs and PCBs 93-123 Williams Street North Dighton, Massachusetts

Sample / (Depth) / Date		Concei	itration		MADEP Met	hod I Standard	MADEP
	1850'	3050'	3250'	SP-I			Method 3 Soil
					S-1 / GW-2 Soil	S-1 / GW-3 Soil	UCL
Analyte	3/15/02	3/15/02	3/15/02	3/15/02	7		
Extractable Petroleum Hydrocarbon (EPH) (ug/kg):	NA						
C19-C36 Aliphatics		<12000	53000	170000	2500000	2500000	20000000
C11-C22 Aromatics		63000	170000	3800004	800000	800000	10000000
Benzo[a]pyrene		120	<190	<460	700	700-	100000
Benzo[b]fluoranthene		130	<190	<4.60	700	700	100000
Benzo[k]fluoranthene		120	<190	<460	7000	7000	400000
Chrysene		140	<190	<460	7000	7000	400000
Fluoranthene		270	240	<460	0000001	1000000	10000000
Pyrene		220	220	<460	700000	700000	10000000
PCB's by 8082 (ug/kg):	ND	NA	NA	NA	2000	2000	100000

Where necessary, the MADEP standards have been converted from ppm to ppb, or vice-versa, to match the laboratory reporting method.

.....

NA: Analysis not performed

ND: No analytes detected above quantitation limits

(x) Indicates analyte concentration not detected at or above specified laboratory quantitation limit (x)

Sample Results:

a: Analyte concentration in this sample exceeds the MADEP standard for \$1/GW1 type soil

With consideration to the above data, only seven (7) of eighty (80) confirmatory sediment samples had detected concentrations of PCBs. All detected PCB concentrations are significantly below the IRA objective of 1,000 ug/kg. No PCBs were detected in sediment samples collected within the channel section extending 200 feet downstream from the terminus of excavation activities. With regard to the EPH confirmatory samples, the laboratory results indicate an overall fourfold to tenfold decrease in C11-C22 aromatic concentrations after sediment excavation. However, two samples, MSW-1, located within a feeder swale at the north end of the site, and SP-1 at the downstream portion of the Site, had a C11-C22 aromatic concentration which was slightly elevated (330,000 and 380,000 ug/kg, respectively) relative to the highest nearby background concentration (320,000 ug/kg). In view of these results an additional three inches of sediment was subsequently excavated from these areas on July 26, 2002 and August 2, 2002. Following excavation, confirmatory samples were collected and analyzed for EPHs, PCBs and asbestos. Laboratory results are summarized on **Table 9** and **Table 10**.

Table 9 Post-excavation Sediment / Soil Analytical Results : MSW-1 93-123 Williams Street North Dighton, Massachusetts

Sample / (Depth) / Date	Concentration PE-MSW-1, 0-3"	MADEP Meth	od I Standard	MADEP Method 3 Soil UCL
		S-1 / GW-2 Soil	S-1 / GW-3 Soil	
Analyte	7/26/2002			
Extractable Petroleum Hydrocarbon (EPH) (ug/kg):				
C19-C36 Aliphatics	23000	2500000	2500000	20000000
C11-C22 Aromatics	180000	800000	800000	10000000
Benzo[a]anthracene	360	700	700	100000
Benzo[a]pyrene	330	700	700	100000
Benzo[b]fluoranthene	430	700	700	100000
Benzo[g,h,i]perylene	130	1000000	1000000	10000000
Benzo[k]fluoranthene	430	7000	7000	400000
Chrysene	620	7000	7000	400000
Fluoranthene	1400	1000000	1000000	10000000
Phenanthrene	600	1000000	100000	10000000
Pyrene	1100	700000	700000	10000000
PCB's by 8082 (ug/kg):	< 200	2000	2000	100000
Asbestos by EPA 763, 7-1-87	ND	NA	NA	NA

Where necessary, the MADEP standards have been converted from ppin to ppb, or vice-versa, to match the laboratory reporting method

..........

ND: No analytes detected above quantitation limits

NA Not Applicable

<x: Indicates analyte concentration not detected at or above specified laboratory quantitation limit (x)</p>

Table 10 Post-excavation Sediment / Soil Analytical Results: SP-1 93-123 Williams Street North Dighton, Massachusetts

Sample / (Depth) / Date	Concentration PE-SP-1, 0-3"	MADEP Meth	od 1 Standard	MADEP Method 3 Soil UCL
Analyte	8/2/2002	S-1 / GW-2 Soil	S-1 / GW-3 Soll	
Extractable Petroleum Hydrocarbon (EPH) (ug/kg):		1		
C11-C22 Aromatics	38000	800000	800000	100000000
PCB's by 8082 (ug/kg):	< 71	2000	2000	100000
Asbestos by EPA 763, 7-1-87	ND	NA	NA	NA

Where necessary, the MADEP standards have been converted from ppm to ppb, or vice-versa, to match the laboratory reporting method

......

ND: No analytes detected above quantitation limits

With consideration to the above EPH confirmatory data, the laboratory results indicate no C11-C22 post-excavation aromatic concentrations at MSW-1 and SP-1 which exceed the highest nearby background concentration (320,000 ug/kg). PCBs and asbestos were not detected in both samples.

3.1.3 Catch Basin Sampling

On March 20, 2002, SAGE collected sediment samples from two catch basins and one drain manhole located in the parking lot within the area of runoff impact. Samples were submitted to a Massachusetts-certified laboratory for PCB analysis via EPA Method 8082 and EPH using MADEP methods. Laboratory reports are included in Appendix 8. Laboratory results are summarized on Table 11.

<x. Indicates analyte concentration not detected at or above specified laboratory quantitation limit (x)</p>

Table 11
Catch Basin Sediment Analytical Results - PCBs and EPHs
March 20, 2002
93-123 Williams Street
North Dighton, Massachusetts

Sample / (Depth) / Date		Concentration		MADEP Med	MADEP Method 1 Standard	MADEP Method 3
	CBEST	Drain West	CB Nerth			
				S-1 / CW-2 Soil	S-1 / GW-3 Soil	790000000
Analyte	3202002	3/20/2002	3/20/2002			
Extractable Petroleum Hydrocarbun (EPH)	PH) (ug/kg):	2				P Alaci P***
C19-C36 Aliphatics	47600	200,0000)	530000	2500000	2500000	200000000
C11-C22 Aromatics	340000"	0000066	1600000**	800000	800000	10060000
Acenaphthene	170	<1400	<330	0000001	1000000	10000000
Acenaphthylene	310	<1400	. 330	100000	100000	10000000
Anthracene	089	<1400	<330	0000001	1000000	10000000
Benzo[a]anthracene	2500**	1700**	520	700	7007	10000
Benzo(a)pyrene	2000**	< J #()(Jrg)	406	700	700	100000
Benzo[b]fluoranthene	0082	1600**	640	002	700	900001
Benzo(g,h.i]perylenc	099	<1400	< 330	0000001	1000000	10000000
Benzo[k]fluoranthene	1900	18(X)	480	7000	7000	400000
Спузеве	3500	3400	916	0007	7000	400000
Dibenz[a,h]anihracene	320	< 1 \$()(thg]	< 330	700	200	100000
Fluoranthene	6200	39(0)	1800	0000001	10(8)880	10000000
Fluorenc	270	<1400	- 330	0000001	1(8)0000()	LOKKKKKOO
Indeno[1,2,3-cd]pyrene	850**	< j 400mil	- 330	700	700	10000
Phenanthrene	3500	3600	965	000007	10000	10000000
Рутеле	5500	3700	1400	700000	7XXX000	100000000
PCB's by 2023 (sg/kg):	3	æ	æ			

Where necessary, the MADEP standards have been converted from ppm to ppb, or vice-versa, to match the laboratory reporting method

•

ND: No analytes detected above quantitation limits

 $<_{x}$: Indicates analyte concentration not detected at or above specified laboratory quantitation limit (x)

Sample Results:

a-e: Analyte concentration in this sample exceeds the MADEP standard for; a: SI/GW1 type soil; c: SI/GW3 type soil

d-f. Although the analyte was not detected, the laboratory quantitation limit for this sample exceeds the MADEP standard for:

d: GW1 type groundwater; f. GW3 type groundwater s: Although the analyse was not detected, the laboratory quantitation limit for the sample exceeds a MADEP Reportable Concentration.

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With consideration to the above data, none of the sediment samples collected from the catch basins / drains had method detectable concentrations of PCBs. EPHs were detected in sediments from all catch basins/drains but these are likely attributable to normal parking lot runoff rather than the transformer release in question. The EPHs in the catch basins and drain manholes would not be considered reportable petroleum releases because the site was compliant with the permitting requirements of the federal NPDES Stormwater Management Program, 40 CFR 122.26, and the Massachusetts Surface Water Discharge Permit program, 314 CMR 3.00 at the time of the release.

On August 29 and August 30, 2002 the sediment in the sumps of the two catch basins and the drain manhole was manually excavated by Frank Corporation. The excavated material was placed in seven 55-gallon drums which are currently staged on-site. Manifests and certificates of disposal for these wastes will be forwarded to the MADEP in the next IRA Status Report which is expected to be issued in January 2003.

3.2 Soil Sampling

On March 20, 2002 SAGE collected three soil samples from the grass shoulder located twenty (20) feet west of the former Expo Building. The purpose of the sampling was to determine potential impacts from transformer oil runoff which potentially may have flowed in a westerly direction during the release. Soil samples were collected from 0 to 1-inch depth using a Teflon hand trowel. Samples were submitted to a Massachusetts-certified laboratory for the analysis of PCBs via EPA Method 8082, EPH using MADEP methods, and asbestos using both EPA-600/M4-82-020 (PLM) and EPA 600/R-93/116 (TEM). Laboratory reports are included in Appendix 9. Laboratory results for EPH and PCBs are summarized on Table 12. Laboratory results for asbestos are summarized on Table 13.

Table 12 Soil Analytical Results – PCBs and EPHs March 20, 2002 93-123 Williams Street North Dighton, Massachusetts

Sample / (Depth) / Date Analyte	Concentration			MADEP Method I Standard		MADEP Method 3
	SS-1	SS-2 3/20/02	SS-3 3/20/02			Soil UCL
	3/20/02			S-1 / GW-2 Soil	S-1 / GW-3 Soil	
C19-C36 Aliphatics	47000	230000	32000	2500000	2500000	20000000
C11-C22 Aromatics	2000004	1600000°°	290000°	800000	800000	10000000
Acenaphthene	<110	<1100	290	1000000	1000000	10000000
Acenaphthylene	310	<1100	150	000001	100000	10000000
Anthracene	250	2100	820	1000000	1000000	10000000
Benzo[a]anthracene	890*	15000**	4600*°	700	700	100000
Benzo[a]pyrene	910**	12000°	4000**	700	700	100000
Benzo[b]fluorantheñe	920×	17000×	5700*	700	700	100000
Benzo[g,h,i]perylene	550	3600	1500	1000000	10000000	10000000
Benzo[k]fluoranthene	840	16000™	3700	7000	7000	400000
Chrysene	1000	22000*	6000	7000	7000	400000
Dibenz[a,h]anthracene	260	2300ac	760×	700	700	100000
Fluoranthene	1600	41000	11000	1000000	1000000	10000000
Fluorene	<110	<1100	350	1000000	1000000	10000000
Indeno[1,2,3-cd]pyrene	600	4800°°	1800°°	700	700	100000
Phenanthrene	500	18000	5300	700000	100000	10000000
Pyrene	1400	33000	8600	700000	70000Ô	10000000
PCB's by 8082 (ug/kg):						
Aroclor 1242	250	<14	<16			
Total PCB	250	<14	<16	2000	2000	100000

Where necessary, the MADEP standards have been converted from ppm to ppb, or vice-versa, to match the laboratory reporting method

<x: Indicates analyte concentration not detected at or above specified laboratory quantitation limit (x)</p>

Sample Results:

a-c: Analyte concentration in this sample exceeds the MADEP standard for:

a: \$1/GW1 type soil

SS=soil Sample

Table 13 Soil Analytical Results – Asbestos March 20, 2002 93-123 Williams Street North Dighton, Massachusetts

Sample Location	Asbestos By PLM	Asbestos By TEM
3/20/02	3/20/02	3/20/02
SS-1	NVA	NVA
SS-2	NVA	NVA
SS-3	NVA .	NVA .

NVA = No Visible Asbestos PLM = Polarized Light Microscopy

TEM = Transmission Electron Microscopy

With consideration to the above data, none of the soil samples had indications of asbestos. PCBs were detected in soil sample SS-1 at a concentration of 250 ug/kg. This concentration is significantly below the IRA objective of 1,000 ug/kg and the Method 1 S-1/GW-2 standard of 2,000 ug/kg. EPHs were detected in all three (3) soil samples. The level of C11-C22 aromatics in sample SS-2 (1,600,000 ug/kg) is elevated relative to the highest background concentration observed in nearby sediments (320,000 ug/kg) and the Method 1 S-1/GW-2 standard (800,000 ug/kg). In view of these results three inches of soil was subsequently excavated from the SS-2 area on July 26, 2002. Following excavation, a confirmatory sample was collected and analyzed for EPHs and PCBs. Laboratory results are summarized on **Table 14**.

Table 14 Post Excavation Soil Analytical Results: PCBs and EPHs in SS-2 Area July 26, 2002 93-123 Williams Street North Dighton, Massachusetts

Sample / (Depth) / Date	Concentration PE-SS2-0-3"	MADEP Met	hod i Standard	MADEP Method 3 Soil UCL
		S-1 / GW-2 Soil	S-1 / GW-3 Soil	
Analyte	7/26/2002			
Extractable Petroleum Hydrocarbon (EPH) (ug/kg):				
C11-C22 Aromatics	630000'	800000	800000	10000000
Acenaphthene	500	1000000	1000000	10000000
Anthracene	1500	1000000	1000000	100000000
Benzo[a anthracene	1 2000°bc	700	700	100000
Benzo[a]pyrene	16000°bc	700	700	100000
Benzo[b]fluoranthene	21000 ^{shc}	700	700	100000
Benzo[g,h,i]perylene	12000	1000000	1000000	10000000
Benzo[k]fluoranthene	14000°bs	7000	7000-	400000
Chrysene	16000°pc	7000	7000	400000
Fluoranthene	36000	1000000	1000000	10000000
Fluorene	520	1000000	1000000	10000000
Indeno[1,2,3-cd]pyrene	1 2000 shc	700°	700	100000
Phenanthrene	14000	1000000	100000	1.00000000
Pyrene	28000	700000	700000	10000000
PCB's by 8082 (ug/kg):	<1000	2000	2000	2000

Where necessary, the MADEP standards have been converted from ppm to ppb, or vice-versa, to match the laboratory reporting method.

ND: No analytes detected above quantitation limits

<x: Indicates analyte concentration not detected at or above specified</p>

laboratory quantitation limit (x)

Sample Results:

b-c: Analyte concentration in this sample exceeds the

MADEP standard for:

- b. \$1/GW2 type soil
- c: \$1/GW3 type soil
- s: Database information indicates analyte concentration exceeds an RC, and as such may constitute an additional Site reporting requirement

With consideration to the above data, the confirmatory soil sample from SS-2 had no detected PCBs but several detected EPHs. The level of C11-C22 aromatics (630,000 ug/kg) is considerably lower than the pre-excavation concentration (1,600,000 ug/kg) and is also lower than the Method 1 S-1/GW-2 standard (800,000 ug/kg). However, this concentration of aromatics is still elevated relative to the highest background concentration observed in nearby sediments (320,000 ug/kg). Thirteen PAHs were also detected in the sample. The levels of benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and ideno(1,2,3 cd) pyrene exceed the applicable Method 1, S-1 standard. It is the opinion of SAGE that this it is likely that EPH background concentrations are higher in this portion of the Site because of the proximity to the highway. Based on documented data, it does not appear that the previous diesel spill which occurred on January 21, 2002 adversely impacted soils on this portion of the Site.

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3.3 Surface Water and Runoff Sampling

An initial round of stream and surface runoff samples was conducted in the period from September 19 through September 26, 2001. Samples were collected using a Teflon pond ladle. Samples were submitted to a Massachusetts-certified laboratory for the analysis of PCBs via EPA Method 8082. One sample from the garage basement was additionally analyzed for semivolatiles via EPA Method 8270. Chain-of Custody forms and Certificates of analysis are included in **Appendix 6**. Laboratory results are summarized as follows in **Table 15**.

Table 15
Pre-excavation Surface Water / Runoff Analytical Results
93-123 Williams Street North Dighton, Massachusetts

Sample / Date			£		Сопсеп	ntration					MADEP	MADEP Method 1 Groundwater Standard	MADEP Method 3
	Garage	MS-I	24 24 25	BR-2	Electric Manhole	NW Fence Cnr runoff	Exterior 2nd Hay bales	D-grad P-lot	Fence	Tremont Culvert		000000000000000000000000000000000000000	
											CW-2	CW-3	
Analyte	9/19/2001	9/17/2001	9/19/2001	9/19/2001	9/19/2001	9/25/2001	9/25/2001	9/25/2001	9/25/2001	9/26/2001	-		
PCBs by 8082 (ug/L):						1				***************************************			
Arocior 1016	<0 4st	<0.6	<0.4*	<0.41*	<40xqtv	<0.3	<0.3	<0.3	<0.3	<0.3			
Aroclor 1221	<0.4°f	<0.6 ^{sdf}	<0.4 ^{sf}	<0.41 st	<40sqlv	<0.3	<0,3	<0.3	<0.3	<0.3			
Aroclor 1232	<0.4"	<0.03	<0.4*	<0.41*	<#Ordin	<0.3	<0.3	<0.3	<0.3	<0.3			3000
Arocior 1242	3 6 9 9 9	-0.6ml	<0.4*	<0.41%	<40pqtv	24.5*cu	<0.3	<0.3	<0.3	<0.3			
Aroclor 1248	<0.4 ^{sf}	<0.0×	<0.4 ⁵ f	<0.415	<40sqtv	<0.3	<0.3	<0.3	<0.3	<0.3	868.8		
Aroclor 1254	2,,,	<0.0>	15101	4.030	420°cu	<0.3	<0.3	<0.3	<0.3	<0.3			
Aroclor 1260	<0.48	<0.6 ^{sdf}	<0.48f	<0.418	<40sqt.	<0.3	<0.3	<0.3	<0.3	<0.3			
Total PCB	, 16°cu	<0.6 ^{adi}	15sca	*.6.*	420rm	24.5***	<0.3	<0.3	<0.3	<0.3	NA	0.3	5
Semivolatiles by GC/MS by 8270 (SIMS)	70 (SIMS)	AN	NA	AN	NA	NA	NA	NA	ŇĀ	ž			
(68/17):	``										7.7	1000	00003
Acenaphimene	0.7										ΥZ.	2000	30000
Acenaphthylene	23						20.00				X	3000	30000
Anthracene	5.9			STORE -			20dap84				A'A	3000	30000
Benzo a anthracene	3.2										NA	3000	30000
Benzo[a]pyrene	3.6*						400				AN	3000	30000
Benzo[b]fluoranthene	2.4	2000000					disse		and a		NA	3000	30000
Benzo[g,h,i]perylene	3.6										ΑN	3000	30000
Benzo[k]fluoranthene	2.38										NA	3000	30000
Chrysene	3.3										NA	3000	30000
Dibenz[a,h]anthracene	6.78								SOARN-		NA	3000	30000
Fluoranthene	0										AN	200	3000
Fluorene	6			2200						C-200	Ϋ́Z	3000	30000
Indeno[1,2,3-cd]pyrene	2.6										NA	3000	30000
2-Methylnaphthalene	20°								600.00		X X	3000	100000
Naphthalene	33*										₹ Z	0009	00009
Phenanthrene	23			C Dec							ΑN	50	3000
Pyrene	13										V V	3000	30000
	1 - 1 - 1	for the state of the	dan of same	Commercial Control of the	to manifely the lake	a mailtanage tenden	hashad						

Where necessary, the MADEP standards have been converted from ppm to ppb, or vice-versa, to match the laboratory reporting method.

NA: Not applicable

X. Indicates analyte concentration not detected at or above specified laboratory quantitation limit (x)

Sample Results.

a.: CW1 type groundwater

c.: GW3 type groundwater

d.: GW1 type groundwater

d.: GW3 type groundwater

d.: GW3 type groundwater

d.: GW3 type groundwater

d.: GW3 type groundwater

f.: GW3 type groundwater

f.: GW3 type groundwater

which was not detected, the laboratory quantitation limit for the sample exceeds a MADEP Reportable Concentration

u.: Although the analyte was not detected, the laboratory quantitation limit for the sample exceeds a MADEP Reportable Concentration

which sample exceeds the MADEP Upper Concentration 1.mit

which analyte was not detected, the laboratory quantitation limit for the sample exceeds the MADEP Upper Concentration Limit

which the analyte was not detected, the laboratory quantitation limit for the sample exceeds the MADEP Upper Concentration Limit

which the analyte was not detected, the laboratory quantitation limit for the sample exceeds the MADEP Upper Concentration Limit

which the analyte was not detected. The laboratory quantitation limit for the sample exceeds the MADEP Upper Concentration Limit was not detected.

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With consideration to the above data, PCBs in excess of the IRA water objective (0.5 ug/L) were noted in water samples collected from the stream channel in downstream areas; within runoff water which accumulated in the Expo garage basement; within runoff water within an electric manhole on the north side of the Expo building; and, in pavement runoff collected at the northwest side of the Expo building. A PCB concentration of 4.8 ug/l was noted at the Tremont Street culvert on September 19, 2001 but this concentration decreased to below the analytical detection limit (0.3 ug/L) as observed in a later sample collected on September 26, 2001 and numerous times thereafter.

Additional stream sampling was conducted weekly at the Tremont Street culvert during the months of October and November while sediment excavation activities in the stream channel were being performed. Laboratory testing of these eight (8) samples revealed no concentrations of PCBs above the analytical detection limit (0.3 ug/L). Chain-of-Custody forms and Certificates of Analysis for the additional Tremont Street samples are attached to the post-excavation sediment analyses included in **Appendix 7**.

On March 15, 2002, a later round of surface water samples was collected from the Tremont Street culvert and from location "SP-1" at the lower end of the release area. The surface water samples were analyzed for EPHs using MADEP Methods. The Tremont Street sample was additionally analyzed for PCBs using EPA Method 8082. The laboratory reports are included in **Appendix 10** and are summarized below on **Table 16**.

Table 16 Surface Water Analytical Results March 20, 2002 93-123 Williams Street North Dighton, Massachusetts

Sample / Date	Concenti	ation	MADEP Method 1	MADEP Method 3
	SP-1	Tremont Street	Standard	Groundwater UCL
Anslyte	3/15/2002	3/15/2002	GW-3 Groundwater	
Extractable Petroleum Hydrocarbon (EPH) (ug/L):				
C11-C22 Aromatics	380	<110	30000	100000
PCB's by 8082 (ug/L):	NA	ND		

Where necessary, the MADEP standards have been converted from ppm to ppb, or vice-versa, to match the laboratory reporting method.

NA: Analysis not performed

ND: No analytes detected above quantitation limits

<xi Indicates analyte concentration not detected at or above specified laboratory quantitation limit (x)

With consideration to the above data, no PCBs or EPHs were detected in the sample collected at the Tremont Street culvert. EPH fractions in the form of C11-C22 aromatics

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were detected in the surface water sample collected at sample location SP-1, however, the concentration does not exceed Method 1, GW-3 limits. It should be noted that EPHs were also detected in sediment at concentrations above background levels at the SP-1 location (see **Table 8**).

3.4 Groundwater Sampling

To evaluate for potential impacts to groundwater from the seepage of contaminated runoff, SAGE installed three monitor wells on the Site. The first monitor well (MW-1) was located directly downgradient (east) of the former Expo Building to evaluate potential impacts from seepage of contaminated runoff into the building's basement and other conduits. The second monitor well (MW-2) was located to evaluate potential impacts from runoff seepage adjacent to a major drainage swale outfall at the parking lot edge. The third monitor well (MW-3), located within ten feet of the stream, was intended to evaluate potential groundwater impacts immediately downstream of the area of immediate runoff and infiltration impact. Monitor well locations are depicted on Figure 3. In addition, groundwater samples were collected from an existing two-inch monitor well located in the parking lot within the area of runoff impact.

Drilling activities were conducted on April 22, 2002. Borings were advanced by Environmental Drilling Inc. of Sterling, Massachusetts utilizing a track-mounted GeoprobeTM rig. *SAGE* personnel were on-site to supervise drilling and characterize subsurface conditions.

Each monitor well was constructed with five (5) to ten (10) feet of 1.0-inch diameter PVC well screen. Flush-threaded 1.0-inch diameter PVC riser pipe was then installed to the ground surface and fitted with an expandable locking plug. Upon installation of well material, each borehole was backfilled with silica sand to a depth above the screened interval where a bentonite seal was installed. Remaining annular space above bentonite seals was backfilled with auger cuttings. A protective steel road box was then nested within a concrete surface seal to secure each well. Monitor well construction details are indicated on the Soil Boring/Monitor Well Construction Logs included in **Appendix 12**. Each monitor well was developed using a peristaltic pump after installation.

Groundwater samples were collected from the four on-site monitor wells on May 1, 2002. Samples were collected using dedicated, disposable bailers. Prior to sample collection, groundwater depths were gauged and each well was purged of at least three well volumes of water. Groundwater samples were collected and stored in analyte-specific glass containers. Samples were submitted to a Massachusetts-certified laboratory for analysis for PCBs via EPA Method 8082 and EPHs using MADEP methods. Laboratory analytical reports including Chain-of-Custody documentation are included as **Appendix**

11. Laboratory results, summarized in **Table 17**, revealed no concentrations of PCBs or EPH constituents above method detection limits or reportable concentrations.

Groundwater Analytical Results – PCBs and EPHs 93-123 Williams Street North Dighton, Massachusetts

Sample / Date		Concentration	tration		MADEP Meth	MADEP Method I Standard	MADEP Method 3
	MW-1	MW-2	MW-3	MW-EX			Croundwater ULL
				2000000	G¥-2	C#-3	
			RECERCIO		Groundwater	Groundwater	
	5/1/2/002	5/1/2002	5/1/2002	5/1/2002			
Extractable Petroleum Hydrocarbon (EPH) (ug/L): 📗 🗈	N ON	ON	g	Q	NA	NA	NA
PCB's by 8082 (ug/L):	2	QN	S	QV.	NA	0.3	ş

Where necessary, the MADEP standards have been converted from ppm to ppb, or vice-versa, to match the laboratory reporting

method.

ND: No analytes detected above quantitation limits

<x: Indicates analyte concentration not detected at or above specified laboratory quantitation limit (x)</p>

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3.5 Groundwater Elevation Survey and Flow conditions

On April 22, 2002, the elevation of all monitoring wells on the Site was surveyed relative to an arbitrary datum located at the top of the yellow hydrant at the north end of the parking lot (designated as 100.00'). Groundwater levels in all monitor wells were gauged on May 1, 2002 using an interface probe capable of differentiating between light non-aqueous phase liquid (LNAPL) and water. LNAPL was not observed in any of the monitor wells. Well gauging data is presented in **Table 18**.

Table 18
Monitor Well Gauging Data
93-123 Williams Street
North Dighton, Massachusetts

Job #: RO	35		-		Weather: S	NNA					Sauged B	y: MWD		~~~~
Date: 5/1/02	02				Temperatu	re: 50'S					Checked	By:		
Well	X & S	Well Well Depth To Depth To Product	Depth To	Product	Product	act Product Depth To L	LWC	Amount to	Amount Well go Odors Color Com	Well go	Odors	Color	Comments	
Number	Diameter	Product (ft)	Water	mickness	Bailed	Bottom	<u></u>	remove (gal)	remove (gal) removed (gal) dry?	dry?		-saarana		****
00000000			(ft)			(ft)						4.00 303.4		
MW-1	2 ,		8.92			13.25	4.33		0.75	ou	none	brown	11:00	
MW-2	bund F		3.02	***********		9.45	6.43	0.78	yaad	ou	none	brown	11:30	
MW-3	=		1.38			92''L	6.38			ou	none	gray	12:00	
MW-EX	2"		5.70			9.32	3.62	1.77	2	ou	none	none light brown	10:30	

The above data was used to construct a groundwater contour map (Figure 10) which depicts the apparent groundwater flow direction across the Site. The overall groundwater flow on the site appears to be in an easterly direction toward the wetlands. This groundwater flow direction assumes homogeneous isotropic aquifer conditions and may vary seasonally.

3.6 Regional Geology and Hydrogeology

According to the USGS Taunton, Massachusetts Topographic Quadrangle, the Sitc is located at an elevation of approximately 30 meters (90 feet) above mean sea level. The topography of the Site property and surrounding area is gently sloping to the east at less than 5% grade.

According to the Surficial Geologic Map of Massachusetts, surficial deposits in the vicinity of the property consist of till and bedrock. Review of the USGS Bedrock Geological Map of Massachusetts dated 1983 indicated that bedrock in the Site area consists of the Rhode Island Formation which is composed of sandstone, shale, graywacke, shale and conglomerate.

Based on a review of the MassGIS Site Scoring Map, the Site does not contain a potentially productive aquifer. The Site contains an intermittent stream which is not located within the Zone A of a Class A surface water body, however, this stream discharges to a Zone A surface water supply located on the Segreganset River 4,000 feet downstream. A copy of the MassGIS Map is included as **Figure 5**.

3.7 Nature and Extent of Contamination

Based on the above data, contaminants detected in on-Site media, following the completion of initial spill response and sediment excavation via IRA's, include PCBs and EPHs. An additional suspect contaminant of concern, asbestos, has not been detected.

3.7.1 PCBs

Since the completion of initial spill response and sediment excavation activities, PCBs have been detected at low concentrations and low frequency in on-site sediments and soils. Since excavation, PCBs have not been detected in surface waters or ground water.

Seven (7) of eighty post-excavation sediment samples had detected concentrations of PCBs. All detected PCB concentrations are significantly below the IRA objective of 1000 ug/kg. The highest level of residual PCBs was noted in the streambed of the

intermittent stream 3,650 feet downstream of the release at a concentration of 510 ug/kg. No PCBs were detected in sediment samples collected within the channel section extending 200 feet downstream from the terminus of excavation activities. No PCBs were detected in sediment samples collected from three on-site catch basins.

PCBs were detected at a concentration of 250 ug/kg in one soil sample (SS-1) collected from the grass shoulder west of the former Expo Building. This concentration is below the IRA objective of 1000 ug/kg and the Method 1 S-1/GW-2 standard of 2000 ug/kg. It appears that some PCBs may been flushed westerly into this area by fire suppression runoff, however the volume and concentration appear to be insignificant.

3.7.2 EPHs

Since the completion of initial spill response and sediment excavation activities, EPHs have been detected in on-site sediments, soils, and surface water. EPHs have not been detected in on-Site groundwater.

Based on the analysis of sediment samples collected from twelve (12) locations in upstream drainage channels not impacted by fire runoff, EPHs are ubiquitous as "background" within area sediments. The C11-C22 aromatics are the most widespread and elevated of carbon fractions. Several polycyclic aromatic hydrocarbons (PAHs), including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, fluoranthene, phenanthrene, and pyrene were also detected locally. These concentrations are considered background and are likely the result of historic parking lot and road runoff. This runoff is not currently regulated under the MCP or NPDES statutes. Likewise, EPHs which were detected in sediments from on-site catch basins/drains also appear to be attributable to normal parking lot runoff rather than the transformer release in question.

With regard to the EPH confirmatory sediment samples, data indicate an overall fourfold to tenfold decrease in C11-C22 aromatic concentrations following sediment excavation activities. Following excavation, no sediment samples appear to have C11-C22 aromatics above the highest background concentration observed in nearby sediments (320,000 ug/kg). In addition, C11-C22 aromatics were detected in a surface water sample collected at sample location SP-1, however this concentration does not exceed Method 1, GW-3 limits.

EPHs were detected in one of the three soil samples (SS-2) collected from the road shoulder west of the Expo Building wherein the C11-C22 aromatic fraction (1,600,000 ug/kg) was elevated relative to the highest background concentration observed in stream sediments (320,000 ug/kg) and the Method 1 S-1/GW-2 standard (800,000 ug/kg). In view of these results, three inches of soil was subsequently excavated from the SS-2 area

on July 26, 2002. Following excavation, a confirmatory sample indicated that the level of C11-C22 aromatics (630,000 ug/kg) was considerably lower than the pre-excavation concentration (1,600,000 ug/kg) and also lower than the Method 1 S-1/GW-2 standard (800,000 ug/kg). However, this concentration of aromatics is still elevated relative to the highest background concentration observed in nearby sediments (320,000 ug/kg). Thirteen PAHs were also detected in the sample. The levels of benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and ideno(1,2,3 cd) pyrene exceed the applicable Method 1, S-1 standard. It is the opinion of SAGE that this it is likely that EPH background concentrations are higher in this portion of the Site because of the proximity to the highway. Based on documented data, it does not appear that the previous diesel spill which occurred on January 21, 2002 adversely impacted soils on this portion of the Site.

3.8 Quality Assurance/Quality Control (QA/QC)

Based on a review of laboratory data and associated QA/QC information, there may be a few samples of questionable validity. *SAGE* is currently evaluating these laboratory reports and any need for re-testing will be forwarded under separate cover.

3.9 Migration Pathways and Exposure Potential

The MCP 310 CMR 40.0483 specifies that the Phase I report shall describe and evaluate potential migration pathways and exposure paths with respect to air, soil, groundwater, and surface water. Additionally, data should be included in the Phase I report with respect to human exposure potential via inhalation, dermal contact, or ingestion in addition to any known impacts to environmental receptors.

3.9.1 Air

The constituents of concern, PCBs and EPHs, are relatively non-volatile compounds. EPHs and PCBs detected in soil and sediment are not located in proximity to any occupied structure. These constituents are not expected to significantly migrate via volatilization or dust releases. Adverse impacts to indoor air quality either on-Site or off-Site are not anticipated.

3.9.2 Soil and Sediment

Data indicate that EPHs and PCBs were detected in soils west of the former Expo Building and within sediments in an intermittent stream on the east side of the Site. Human exposure would be expected to potentially occur via dermal contact or ingestion. Potential exposure would most likely happen in the event of excavation activities

associated with subsurface and/or overhead utilities at the area west of the former Expo Building where municipal drains and overhead power lines are located. In addition, PCBs in sediments have a high potential for bioaccumulation, thus creating a potential for human exposure through the consumption of fish.

3.9.3 Groundwater

The Site is not located within a current or potential drinking water source area. Constituents of concern were not detected in on-site groundwater. Exposure via groundwater is not anticipated.

3.9.4 Surface Water

EPH fractions in the form of C11-C22 aromatics were recently detected in a surface water sample collected from the intermittent stream at sample location SP-1, located approximately 3,000 feet down stream from the release. Human exposure would be expected to potentially occur via dermal contact or ingestion. Migration of this contamination downstream could result in a potential discharge of contaminants to the Segreganset River, a Class A surface water which is used as a drinking water supply. Biological receptors, including fish, could additionally be adversely impacted.

4.0 TIER CLASSIFICATION

Post-excavation site data has been used to complete a Tier Classification pursuant to 310 CMR 40.0510. A Numerical Ranking System (NRS) Score of 192 was obtained, categorizing the Site as **Tier II**. A NRS scoresheet is included as **Appendix 13**.

5.0 STAGE I ENVIRONMENTAL SCREENING

Under the Massachusetts Contingency Plan, 310 CMR 40.0995(3), environmental risk characterization is required for disposal sites using the Method III risk characterization approach. The Stage I Environmental Screening is designed to determine whether or not a more detailed Stage II environmental risk characterization is needed to complete the Method III risk characterization. The Stage I screening must: 1) Identify potential exposure pathways for environmental receptors; 2) Identify any readily apparent past or current environmental harm; and, 3) Identify conditions where sediments exceed screening benchmark concentrations. These items are discussed as follows:

Potential Exposure Pathways

Data indicate that Extractable Petroleum Hydrocarbons (EPHs) and polychlorinated biphenyls (PCBs) were detected in sediment and surface water samples collected from drainage swales and an intermittent stream. Environmental exposure to these contaminants would be expected to occur via direct contact and ingestion by both aquatic and terrestrial organisms. PCB's in sediments and surface water have a high potential for bioaccumulation, creating a further potential for human or biological exposure through the consumption of fish or waterfowl and through other food chain pathways.

Evidence of Past or Current Environmental Harm

Within 24 hours of the oil spill, SAGE personnel observed at least three dead fish, specifically red pickerel (Esox Americanus) in the intermittent stream. Dead amphibians, such as frogs, were not apparent. The water in the stream was observed to be extremely turbid due to ash runoff from the fire. It appears likely that anoxic conditions may have locally existed in the stream at that time but field measurements were not collected to verify this.

Since the oil release on September 15, 2001, extensive Immediate Response Actions (IRA's) have been completed to remediate the impacts of the oil release. These response actions have included the removal of free oil with absorbant pads/booms and the excavation and disposal of approximately 100 tons of impacted sediment from the stream bed. SAGE personnel visited the site on several occasions in February through May, 2002 since these IRA's were completed. Aside from brush and other vegetation which had to be removed to facilitate excavation of the streambed, SAGE observed no evidence of any dead or stressed organisms anywhere on the Site or in areas downstream from the Site.

Sediment Screening Benchmark Concentrations

Since the completion of IRA activities approximately 100 post-excavation sediment samples have been collected from the streambed for PCB and/or EPH analyses. Based on available data, fifteen (15) scdiment samples have either PCB or EPH constituent concentrations in excess of MADEP-established Threshold Effect Concentrations (TECs). Laboratory data has been previously submitted to your office and the MADEP in IRA Status Report #1, issued on January 16, 2002, and IRA Status Report #2, issued on July 16, 2002. The laboratory results for samples which have exceeded TECs are summarized on the attached **Table 19**.

Table 19 Threshold Effect Concentration Exceedances 93-123 Williams Street North Dighton, Massachusetts

Sample No. /	Date Collected	Contaminant	Concentration	TEC*
Location	00000000000000000000000000000000000000	20000	(μg/kg)	(μg/kg)
PE-NSW-1	11/14/01	Benzo(a)anthracene	300	108
		Benzo(a)pyrene	350	150
		Chrysene	460	166
		Fluoranthene	810	423
		Pyrene	660	195
PE-MSW-1	11/14/01	Anthracene	740	57.2
		Benzo(a)anthracene	2600	108
		Benzo(a)pyrene	2400	150
		Chrysene	3200	166
		Dibenz(a,h)anthracene	370	33.0
		Fluoranthene	5600	423
		Fluorene	380	77.4
		Pyrene	4500	195
PE-SSW-1	11/14/01	Anthracene	340	57.2
		Benzo(a)anthracene	1600	108
		Benzo(a)pyrene	1300	150
		Chrysene	1800	166
		Dibenz(a,h)anthracene	220	33.0
		Fluoranthene	2800	423
THE STATE OF THE S		Pyrene	2300	195
PE-SP-6A	11/14/01	Anthracene	220	57.2
		Benzo(a)anthracene	1000	108
		Benzo(a)pyrene	800	150
		Chrysene	1200	166
		Fluoranthene	2000	423
TYT	11/14/01	Pyrene	1700	195
PE-SP-7	11/14/01	Benzo(a)anthracene	290	108
		Benzo(a)pyrene	240	150
		Chrysene Fluoranthene	340 650	166
		1	580	423 195
PE-SP-8	11/14/01	Pyrene Benzo(a)anthracene	360	193
re-or-o	11/14/01	, ,	320	150
		Benzo(a)pyrene Chrysene	470	166
		Fluoranthene	1000	423
		Pyrene	820	195
PE-SP-9	11/14/01	Benzo(a)anthracene	430	108
1 E-31-9	11/1-4/01	Benzo(a)pyrene	370	150
		Chrysene	520	166
		Fluoranthene	1000	423
		Pyrene	840	195
PE-SP-10	11/14/01	Benzo(a)anthracene	320	108
I IOI -IV	11/17/01	Benzo(a)pyrene	260	150
		Chrysene	400	166
		Fluoranthene	820	423
		Pyrene	650	195
1100'-1150'	10/18/01	Total PCBs	61	59.8
	10/19/01	Total PCBs	136	59.8
1250'-1300'				
1300'-1350'	10/19/01	Total PCBs	91.6	59.8
2100'-2150'	10/25/01	Total PCBs	62	59.8
3000'-3050'	10/30/01	Total PCBs	250	59.8
	ar	Pyrene	220	195
3200'-3250'	3/15/02	Total PCBs	79.6	59.8
		Pyrene	220	195
3600'-3650'	10/30/01	Total PCBs	510	59.8

^{*}Threshold Effect Concentration for Freshwater Sediment per MADEP ORS Technical Update, May 2002. Not all detected EPH constituents have established TECs. Only detected constituents with established TECs are listed.

NSW = North Swale MSW = Middle Swale SSW = South Swale

SP = Sample Point (main stream channel)

Based on the above observations and findings, SAGE concludes that a potential future environmental exposure has been identified on the Site. Pursuant to the requirements of 310 CMR 40.0995(3)(b), a Stage II environmental risk characterization must be completed.

6.0 CONCLUSIONS

Based on the above observations and findings, PCBs were detected at low concentrations and low frequency in on-site sediments and soils since the completion of initial spill response and IRA excavation activities. Since excavation, PCBs have not been detected in surface waters or ground water. All detected residual PCB concentrations are significantly below the IRA objective of 1,000 ug/kg and the Method 1 S-1/GW-2 standard of 2,000 ug/kg.

Since the completion of initial spill response and IRA excavation activities, residual EPHs have been detected in on-site sediments, soils, and surface water. EPHs have not been detected in on-site groundwater. Data indicate an overall fourfold to tenfold decrease in EPHs following sediment excavation. Following excavation, no sediment samples appear to have C11-C22 aromatics above the highest background concentration observed in nearby sediments (320,000 ug/kg).

With regards to soil conditions, a post excavation soil sample from location SS-2 situated along the road shoulder west of the release area had several detected EPHs. The level of C11-C22 aromatics (630,000 ug/kg) is considerably lower than the pre-excavation concentration (1,600,000 ug/kg) and is also lower than the Method 1 S-1/GW-2 standard (800,000 ug/kg). However, this concentration of aromatics is still elevated relative to the highest background concentration observed in nearby sediments (320,000 ug/kg). Thirteen PAHs were also detected in the sample. The levels of benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and ideno(1,2,3 cd) pyrene exceed the applicable Method 1, S-1 standard. EPH background concentrations are likely higher in this portion of the Site because of the proximity to the roadway. Based on documented data, it does not appear that the previous diesel spill, which occurred on January 21, 2002, adversely impacted soils on this portion of the Site.

Based on the above observations and findings, contaminant levels on the Site have not been reduced through IRA activities to concentrations which are below background or the applicable Method 1 Standards. The requirements of a Class A or Class B Response Action Outcome, pursuant to 310 CMR 40.1000, have not been met. Therefore, either additional IRA activities or Comprehensive Response Actions, pursuant to the requirements of 310 CMR 40.0800, are required for the Site. SAGE recommends that a

Method III Risk characterization with a Stage II Environmental Screening be completed prior to the initiation of any additional response activities on the Site.

7.0 LIMITATIONS

Data obtained from public agencies, site inspections and data mapping sources was used in the characterization of this Site. The accuracy of the conclusions derived form the data is based solely on the accuracy of the data reported and or supplied. Should data be made available concerning the Site which is not included in this report, it should be reported to *SAGE* Environmental, Inc. so that findings, conclusions and/or recommendations can be altered and modified (if necessary). Events occurring on the Site after on-site inspections are beyond the scope of this report.

Any qualitative or quantitative information regarding the Site which was not available to SAGE Environmental, Inc. at the time of this assessment may result in a modification of the representations made in this report.

Under the terms of the agreement no attempt was made to determine the compliance or regulatory status of present or former owners or operators of the Site with respect to federal, state, or municipal environmental or land use laws or regulations.

Due to the fact that geological and soil formations are inherently random, variable and indeterminate (heterogeneous) in nature, the professional services and opinions provided by SAGE Environmental, Inc. under our agreement are not guaranteed to be a representation of complete Site conditions, which are variable and subject to change with time or the result of natural or man-made processes. Although our services are extensive, opinions, findings and conclusions presented are limited to and by the data supplied, reported and obtained. SAGE Environmental, Inc. makes no expressed or implied representations, warranties or guarantees regarding any changes in condition of the premises after the date of the on-Site inspection(s).

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